Technical Report

UNFCCC Standing Committee on Finance

Fourth (2020) Biennial Assessment and Overview of Climate Finance Flows

United Nations
Framework Convention on
Climate Change

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SUMMARY BY THE STANDING COMMITTEE ON FINANCE OF THE FOURTH (2020) 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). The SCF also serves the Paris Agreement in line with its functions and responsibilities established under the COP including the BA.[1]

2. Since the first BA in 2014, the preparation of subsequent BAs has been guided by mandates from the COP and the CMA to the SCF.[2]

3. **The fourth (2020) BA presents an updated overview and trends in climate finance flows up until 2018 and assesses their implications for international efforts to address climate change.** The fourth BA includes an overview of climate finance flows from developed to developing countries[3], and available information on domestic climate finance, cooperation among developing countries, and other climate-related flows that constitute global climate finance. It assesses the key features of climate finance flows including their composition and purposes, and explores insights into their effectiveness, access to finance, country ownership and alignment with the needs and priorities of beneficiaries, as well as their magnitude in the context of broader flows. In addition, it provides information on recent developments in the methodological issues related to the tracking of climate finance at the international and domestic level, operational definitions of climate finance in use and new indicators for measuring the impact of climate finance.

4. **The fourth (2020) BA includes mapping of relevant information to the long-term goal outlined in Article 2, paragraph 1(c) of the Paris Agreement on making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.** The fourth BA provides the first mapping exercise to be conducted every four years to identify the latest actions and activities of different actors related to making finance flows consistent with low GHG emission and climate-resilient development pathways including national Governments, development finance institutions, central banks and regulators, multilateral finance institutions and climate funds, as well as private sector actors such as corporations, banks and investors. Information produced by United Nations entities, initiatives and under other multilateral processes, as well as the perspective of civil society organizations and the academic community, were also explored. Emerging methodologies, indicators and datasets to support tracking the consistency of finance flows are also discussed in respective chapters.

5. The fourth BA comprises this summary prepared by the SCF, and a technical report, prepared by experts under the guidance of the SCF drawing 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

6. The fourth BA provides an updated overview of climate finance flows in 2017 and 2018, along with data on trends from 2011 to 2016 compiled from previous BA reports where applicable. Due diligence has been undertaken to use the best information available from the most credible sources. In compiling estimates, efforts have been made to ensure that they are based on activities in line with the convergence of operational definitions of climate finance identified in the first BA and to avoid double counting by focusing on primary finance, which is finance for a new physical item or

1) Decision 2/CP.17, paragraph 121(f), 1/CP.21, paragraph 63;

2) Decisions 1/CP.18, paragraph 71, 5/CP.18, paragraph 11, 3/CP.19, paragraph 11, paragraph 37(f) in the annex to decision 8/CP.22; Decision 4/CP.24, paragraphs 4,5,10, 19/CMA.1, para. 36(d).

3) For the purpose of the overview of climate finance in the BA, various data sources are used to illustrate flows from developed to developing countries, without prejudice to the meaning of those terms in the context of the Convention and the Paris Agreement, including but not limited to Parties included in Annex II/Annex I to the Convention to Parties not included in Annex I to the Convention and MDBs; OECD members to non-OECD members; OECD DAC members to countries eligible for OECD DAC official development assistance; and other relevant classifications.

activity. Challenges were nevertheless encountered in collecting, aggregating and analysing information from diverse sources.

7. **Data uncertainty**: Most of the uncertainties associated with each source of data which have different underlying causes identified in the previous BAs persist, although there have been some improvements. Uncertainties relating to the data on domestic public investments, resulting from the lack of geographic coverage and differences in the way tracking methods are applied, as well as significant changes in the methods used for estimating energy efficiency and sustainable transport over the years. Uncertainties also arise from the lack of transparency of data for determining private climate finance; the methods used for estimating adaptation finance; differences in the assumptions used in underlying formulas for attributing finance from MDBs to developed countries; the classification of sustainable or green finance; and the incomplete data on non-concessional finance flows.

8. **Data gaps**: Significant gaps in the coverage of sectors and sources of climate finance remain, particularly with regard to private investment, and adaptation and resilience. While estimates of incremental investment in energy efficiency have improved, understanding of the public and private sources of finance and the financial instruments used remains inadequate. For data on sustainable transport, efforts have been made to improve coverage of public and private investment in electric vehicles and charging infrastructure. However, high-quality data on private investments in sustainable agriculture, forestry and land use, water, waste, and adaptation and resilience are particularly lacking. Specifically, adaptation finance estimates, which are context-specific and incremental, are difficult to compare with mitigation finance estimates. and more work is needed on estimating climate-resilient investments.

9. In relation to mapping information relevant to Article 2, paragraph 1(c) of the Paris Agreement, the lack of a common interpretation of or guidelines on what information qualifies as relevant presents a challenge in adequately capturing the scope and depth of related action. For the fourth BA adopts an actor-specific mapping approach was adopted, as opposed to focusing on particular financial instruments, asset classes, or categories of action, in order to capture what financial sector actors consider to be relevant information on activities to be consistent with or align with the goals of the Paris Agreement. Such mapping may be non-exhaustive and limited in terms of representation across geographic areas and sectors. It may also obscure the role of actors that work across multiple categories. Given that a significant amount of information considered relevant is to be derived from multi-member initiatives and coalitions, potentially due to potential benefits of network effects, focusing on these groups may limit the mapping of information from individual cases that may be considered best practice or leading examples. Furthermore, there is a limited track record or in-depth information related to implementation of activities to be consistent with or align to the Paris Agreement to enable a thorough assessment of effectiveness, and therefore its relevance, in achieving the goal outlined in Article 2, paragraph 1(c).

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

III. Key findings

A. Methodological issues related to transparency of climate finance

11. **Improvements in the consistency of reporting on climate finance under the Convention are observed.** Progress in the consistency of climate finance reporting was observed in the BR4 common tabular format submissions from Annex II Parties and the provision of qualitative information in the documentation boxes of those tables or in the BRs. One improvement relates to the reporting by type of support, with Parties only reporting on mitigation, adaptation and cross-cutting categories, without including other types of support . Nevertheless, improvements in aggregating geographic or sector-based information remains limited owing to differences in the approaches used by Parties and the functionality of the reporting system to allow differences in reporting. Several Parties referred to ongoing work to resolve challenges related to reporting on private finance mobilized by public interventions.

12. Data coverage and granularity of reporting on climate finance received in the BURs of non-Annex I Parties has improved since the previous BA. Nineteen Parties submitted a BUR for the first time since the

previous BA in addition to a further 27 Parties submitting second or third BURs. The proportion of BURs that include information on finance received rose from approximately 60 per cent in 2014 to over 90 per cent in 2019–2020. A total of 41 Parties have provided quantitative information on climate finance received at the project or activity level in tabular formats. Many differences remain in the approaches used for reporting by Parties, including time periods of reported data and information on types of support, sectors and financial instruments. Several Parties, included additional information in their second and third BURs on whether a project is linked to capacity-building, technology development and transfer or technical assistance.

13. **Domestic public climate finance data availability is increasing with more countries establishing climate budget tagging systems.** Notable improvements were observed in the tracking of domestic climate-related public or private finance flows with the issuance of green sovereign bonds incentivizing the establishment of regular tracking systems in both developed and developing countries, building on previous work through CPEIRs. Thirteen countries have established tracking systems for national budgets with a further five countries with methodologies on tracking in development. In total, estimates on domestic public expenditures on climate change in 2017–2018 amount to approximately USD 86.6 billion (see section B).

14. **Operational definitions for climate finance in use generally reflect a common understanding of what is considered mitigation or adaptation finance, but differ when it comes to details of sector-specific activities, certain financial instruments and approaches to public and private finance flows.** Operational definitions of climate finance in use have evolved over the years. The MDB list of activities eligible for classification as mitigation finance added charging stations for electric vehicles and hydrogen or biofuel fuelling in 2017, and resource efficiency in aquaculture in 2018, while the OECD-DAC integrated adjustments to adaptation finance eligibility criteria in 2016 to harmonize with stepwise approach developed by the MDBs.

15. The lists of climate mitigation activities developed by MDBs have served in part to inform green or climate-aligned taxonomies in recent years to support the development of the green bond market and/or regulatory efforts in the field of sustainable finance to combating greenwashing and promote the standardization of financial products. Approaches to defining mitigation and adaptation activities are broadly consistent across various international organizations and regulatory initiatives, although inclusion/exclusion lists and approaches to the criteria used to define such activities can vary.

16. Parties submissions on operational definitions of climate finance in use highlighted a range of views on the need for, form, and scope of, a common definition of climate finance. Some Parties noted that a single definition would not be useful or should be broad enough to cater for the dynamic and evolving nature of climate finance due to a variety of factors, including NDCs and implementation of the enhanced transparency framework over time, tracking progress related to article 2, paragraph 1(c) of the Paris Agreement, and changes in methodologies and definitions on mitigation and adaptation due to data availability or improvements in processes and knowledge.

17. Some Parties pointed to the use of a classification system or taxonomy rather than a single definition and referred to the development of taxonomies or classifications outside the UNFCCC process or within national sustainable finance frameworks.

18. Other Parties noted how the lack of a common definition affects the ability to track and assess the fulfilment of the obligations of Annex II Parties under the Convention and those of developed country Parties under the Paris Agreement. A common definition could support the preparation of the BA and the overall transparency and effectiveness of the UNFCCC process by highlighting the linkage between the level of action of developing countries and the level of support provided and, ultimately, the achievement of the objectives of the Convention and the Paris Agreement. In this context, two submissions proposed an operational definition of climate finance, while other submissions proposed an operational approach to achieving greater convergence among definitions over time, based either on common principles or responses to a common set of questions to provide granular information.

19. **More methodologies on measuring outcomes of financing for climate resilience have emerged in recent years.** Many multilateral institutions are in the process of developing or have already developed frameworks for measuring impacts, with an increasing focus on adaptation and resilience, such as the Resilience Rating System by the World Bank Group and the Climate Resilience Metrics Framework by MDBs and IDFC. Although approaches to measuring impacts of climate finance vary, most multilateral institutions, as well as bilateral contributors, use a similar set of mitigation and adaptation indicators.

20. **There are four common decision points identified in emerging methodologies and metrics in use for tracking consistency with low GHG emission and climate-resilient development pathways.** As with tracking climate finance, emerging methodologies relevant to tracking consistency with the long-term goal under Article 2, paragraph 1(c) of the Paris Agreement, also need to overcome issues related to definitions, scope or boundary of tracking, data availability and comparability.

21. Methods differ as to the type of finance flows, stocks and services tracked (primary or secondary markets) and the ways of measuring consistency (e.g. on the basis of GHG emissions, emissions intensity metrics or technology choices). However, the four common decision points are:

(a) Identifying a given pathway to low-emission and climate-resilient development against which the consistency of actions will be measured. Different pathways may be chosen relative to their consistency with low-emission development and mitigation goals, and to their consistency with climate-resilient development and adaptation or resilience goals. Pathways may result in compatible activity lists or performance metrics against which to measure action. In addition, the timescale used to measure consistency is important. This could be, for example, within 5 or 10 years, or by a given year, such as 2050;

(b) Reviewing the activities and actions to be tracked (e.g. investments, economic activities such as production and sales or purchasing of goods and services, policymaking, legislation and voluntary standards) that the stakeholder undertakes which is relevant to whether the pathway will be achieved;

(c) Understanding which finance flows that go towards realizing the activities and actions should be tracked by the stakeholder;

(d) Identifying which key metrics to use to assess whether finance flows and related processes result in activities and actions that are consistent with the given pathway identified during the review.

B. Overview of climate finance flows in 2017-2018

22. **Global climate finance flows were 16 per cent higher in 2017-2018 than in 2015-2016, to reach an annual average of USD 775 billion and achieved significantly higher results in particular in the area of renewable energies.** High-bound climate finance estimates increased from USD 692 billion in 2016 to USD 804 billion in 2017 and USD 746 billion in 2018, for an annual average of USD 775 billion. The growth in 2017 was driven largely by an increase in new private investment in renewable energy as a result of decreasing technology costs; while the decline in 2018 was due primarily to a slowdown in wind and solar investment in major markets. Figure 1 provides a breakdown of global climate finance flows in 2015-2018 by sector and Figure 2 provides an overview of global climate finance and finance flows from developed to developing countries.

23. **Continued decreases in renewable energy technology costs mean new investment goes further.** Renewable energy technology costs continued to decline in 2017-2018 compared with those in 2015-2016, with a 29 per cent decrease for solar PV, an 18 per cent decrease for offshore wind and a 10 per cent decrease for onshore wind, emphasizing how greater impacts are achieved for each new dollar of investment. In 2018, 100 per cent more renewable energy capacity was commissioned than in 2012 with only a 22 per cent increase in investment.

24. For the fourth BA, several new data sources have been used to track climate finance in areas that were not previously included such as EV charging infrastructure, transport, water, waste and municipal investments. Wherever possible, the data has been integrated in the time series retroactively to allow for trend comparisons.

25. **Climate finance from developed to developing countries increased through various channels.** Total public financial support reported by Annex II Parties in their BRs submitted (as at October 2020) amounted

Figure 1

Global climate finance flows in 2015–2018
(Billions of United States dollars)

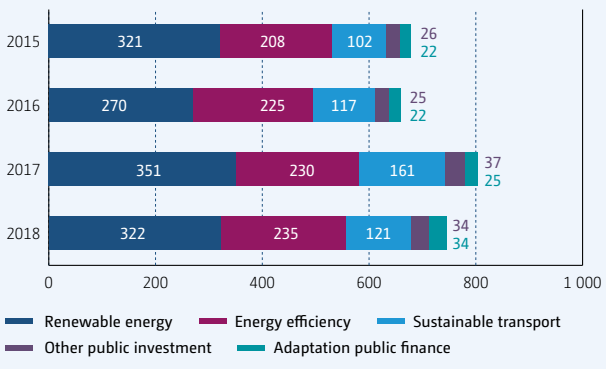
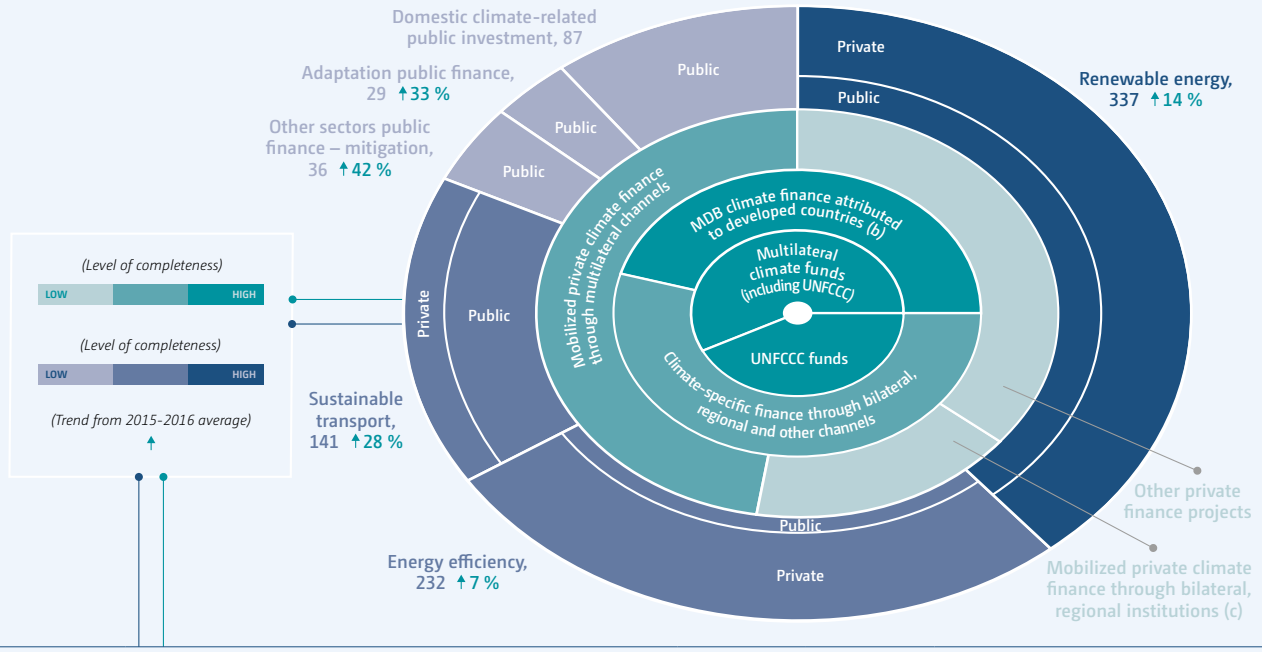


Figure 2

Climate finance flows in 2017-2018 (billions of USD, annualized)



		2017	2018	Sources of data and relevant section of technical report
Global total flows	Renewable energy	351.4	322.4	Section 2.2.2 CPI 2020 based on multiple sources
	Public	66.5	51.4	
	Private	284.9	271.0	
	Energy efficiency	229.9	234.6	Section 2.2.3 IEA Energy Efficiency Market Reports/CPI
	Public	35.7	32.3	
	Private (a)	194.2	202.3	
	Sustainable transport	160.5	120.5	Section 2.2.4 IEA World Energy Investment Reports/ CPI 2020 based on multiple sources
	Public	118.1	70.9	
	Private	42.4	49.7	
	Other sectors public finance – mitigation	37.4	34.4	Section 2.2.5 (see notes) CPI 2020 based on multiple sources
	Adaptation public finance	24.7	34.1	Section 2.2.6 CPI 2020 based on multiple sources
	Domestic climate-relate public investment	86.7	86.7	Section 2.3 BURs, CPEIRs, I4CE, IDB, UNDP, various government reports
Flows to non-Annex I Parties	UNFCCC funds	1.5	2.4	Section 2.5.2 Fund financial reports, CFU
	Multilateral climate funds (including UNFCCC)	2.2	3.1	
	Climate-specific finance through bilateral, regional and other channels	28.1	31.8	Section 2.5.1 Annex II Party BRs
	MDB climate finance attributed to developed countries (b)	24.1	25.8	Section 2.5.2 OECD 2020a
	Mobilized private climate finance through multilateral channels	10.8	10.8	Section 2.5.4 OECD 2020a
	Mobilized private climate finance through bilateral, regional institutions (c)	3.7	3.8	
	Other private finance projects	5.3	11.0	Section 2.5.4 CPI 2020 based on multiple sources

Abbreviations: BUR=Biennial Update Reports, CPEIR=Climate Public Expenditure and Institutional Reviews, CPI=Climate Policy Initiative, IEA=International Energy Agency, I4CE=Institute for Climate Economics, MDB=Multilateral Development Bank, OECD=Organisation for Economic Co-operation and Development, UNDP=United Nations Development Programme.

Notes: a) Value discounts transport energy efficiency estimates by 8.5% to account for overlap with electric vehicle estimates, same as in the previous years. b) From Annex II to non-Annex I Parties. Values derived from calculating equity shares of Annex II Parties per MDB multiplied by the climate finance provided to non-Annex I Parties from MDBs own resources. c) Estimates include private finance mobilized through public interventions from developed countries.

to USD 45.4 billion in 2017 and USD 51.8 billion in 2018. The annual average (USD 48.7 billion) represents an increase of 2.7 per cent from the annual average reported for 2015-2016. Climate-specific financial support, which accounts for up to three-quarters of the financial support reported in the BRs, increased by 13 per cent on a comparable basis, to an annual average of USD 36.3 billion. Most of climate-specific financial support was reported through bilateral, regional and other channels with USD 28.1 billion in 2017 and USD 31.8 billion in 2018 respectively.

26. Mitigation finance constitutes the largest share of climate-specific financial support through bilateral channels at 65 per cent. However, the share of adaptation finance increased from 15 per cent in 2015–2016 to 21 per cent in 2017-2018 as it grew at a higher rate than mitigation finance.

27. UNFCCC funds and multilateral climate funds approved USD 2.2 billion and USD 3.1 billion for climate finance projects in 2017 and 2018, respectively. The annual average for 2017-2018 (USD 2.7 billion) represents an increase of approximately 39 per cent compared with those in 2015–2016, owing primarily to increases in project approvals by the GCF Board and the GEF Council. In terms of inflows to the operating entities of the financial mechanism, the seventh GEF replenishment (GEF-7) resulted in USD 4.1 billion in pledges and USD 802 million allocated to the climate change focal area, compared to USD 4.4 billion in total pledges and USD 1.26 billion allocated to the climate change focal area in GEF-6. The first replenishment of the GCF-1 pledging conference in 2019 amounted to USD 9.8 billion, compared to USD 10.2 billion from the initial resource mobilization pledging conference in 2014.

28. MDBs provided USD 34 billion and USD 42 billion in climate finance from their own resources to developing and emerging economies in 2017 and 2018, respectively. The annual average (USD 36.6 billion) represents a 50 per cent increase since 2015-2016. The attribution of these flows to developed countries is calculated at between USD 23.3-24.1 billion in 2017 and USD 25.8-28.0 billion in 2018.

29. The uncertainty of the data on the geographic sources and destinations of private finance flows to developing countries remains significant. OECD estimates that private climate finance mobilized by developed countries through bilateral and multilateral channels amounted to USD 14.5 billion in 2017 and USD 14.6 billion in 2018.

30. Information on the recipients of climate finance remains limited. The growth in BUR submissions from non-Annex I Parties has resulted in a greater amount of information on finance received than for previous BAs. However, time lags in data availability for reporting make it difficult to provide updated or complete information on finance received in 2017-2018. Of the 63 Parties that have submitted BURs as of December 2020, 28 included some information on climate finance received in 2017 or 2018. In total, USD 7.8 billion was reported as received for projects starting in 2017 and USD 2 billion for projects starting in 2018. A total of 23 Annex II Parties included information on recipients of finance at either the country or project level in their BR4s.

31. **South-South climate finance flows have increased, but data availability and coverage remain limited.** While data availability and coverage of climate finance flows between developing countries remain limited, it is a growing area of global climate finance flows. Several countries voluntarily report to standardised reporting systems such as the OECD DAC. Up to 20 development finance institutions that are IDFC members are based in non-OECD countries, and MDBs led by developing countries such as AIIB and NDB continue to increase finance flows. Estimates of South-South climate finance flows amounted to USD 17.8-18.0 billion in 2017 and USD 18.0-18.2 billion in 2018.

C. Assessment of climate finance flows

32. Trends in public concessional climate finance, including bilateral flows, multilateral climate funds and funds from MDBs, point to increasing flows towards developing countries from multilateral sources, while bilateral climate finance flows have stagnated.

33. **Support for mitigation remains greater than support for adaptation.** Adaptation finance has remained at between 20 and 25 per cent of committed concessional finance across all sources (noting measurement differences), showing little movement since the previous BA (see figure 3). However, the continued rise in public climate finance flows contributing towards both adaptation and mitigation complicates this assessment. The rise is most obvious in flows from multilateral climate funds and through bilateral channels. While the GCF allocates climate finance for projects in this cross-cutting category to adaptation or mitigation, not all institutions do so in their programming or reporting. This makes it more difficult to track progress in scaling up adaptation finance

and ultimately achieving balance between finance for adaptation and mitigation objectives.

34. **Grants continue to be a key instrument for adaptation finance.** In 2017–2018 grants accounted for 64 and 94 per cent of the face value of bilateral adaptation finance reported to the OECD and of adaptation finance from the multilateral climate funds, respectively (see figure 3). During the same period, 9 per cent of adaptation finance flowing through MDBs was grant-based. These figures indicate no change since 2015–2016. Mitigation finance remains less concessional in nature, with 30 per cent of bilateral flows, 29 per cent of multilateral climate fund approvals and 3 per cent of MDB investments taking the form of grants. These figures, however, may not fully capture the added value brought by combining different types of financial instruments, or technical assistance with capital flows, which can often lead to greater innovation or more sustainable implementation.

35. With regard to the geographic distribution of public concessional climate finance, Asia remains the principal beneficiary region. In 2017–2018, the region received on average, 30 per cent of funding commitments from bilateral flows, multilateral climate funds and MDBs. Sub-Saharan Africa received an average of 24 per cent of commitments across the sources in the same period, followed by Latin America and the Caribbean followed with 17 per cent and the remainder going to the Middle East and North Africa, Central, Eastern and South-Eastern Europe, the South Caucasus and Central Asia.

36. The LDCs and SIDS are particularly vulnerable to the adverse effects of climate change. Article 9 of the Paris Agreement emphasizes the importance of the provision of scaled up financial resources to these countries. In 2017–2018, funding committed to projects in the LDCs represented 22 per cent of bilateral flows and 24 per cent of finance approved through the multilateral climate funds. Funding committed to SIDS represented 2 per cent of bilateral finance and 10 per cent of finance approved through the multilateral climate funds. Of the finance provided to the LDCs and SIDS, the amount targeting adaptation fell slightly in 2017-2018, although the shares remained stable overall. MDBs channelled 11 per cent of their climate finance to the LDCs and 3 per cent to SIDS. As in previous years, adaptation finance as a share of all climate finance to these countries was significantly higher than that of the overall climate finance spending by MDBs.

Figure 3

Characteristics of international public climate finance flows in 2017–2018

	Annual average	Area of support				Financial instrument		
	USD billion	Adaptation	Mitigation	REDD-plus[a]	Cross-cutting	Grants	Concessional loans	Other
Multilateral climate funds[b]	2.7	20%	48%	5%	27%	53%	40%	8%
Bilateral climate finance[c]	29.9	21%	65%	–	15%	64%	36%	<1%
MDB climate finance[d]	39.2	25%	75%	–	–	5%	75%	20%

Note: All values based on approvals and commitments. Abbreviations: MDB = multilateral development bank.

a. In decision 1/CP.16, paragraph 70, the Conference of the Parties 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.

b. Including Adaptation for Smallholder Agriculture Programme, Adaptation Fund, Bio Carbon Fund, Clean Technology Fund, Forest Carbon Partnership Facility, Forest Investment Program, Global Climate Change Alliance, Global Environment Facility Trust Fund, Green Climate Fund, Least Developed Countries Fund, Partnership for Market Readiness, Pilot Programme for Climate Resilience, Scaling Up Renewable Energy Program, Special Climate Change Fund and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries.

c. Bilateral climate finance data are sourced from biennial reports from Parties included in Annex II to the Convention (that further include regional and other channels) for the annual average and thematic split. The financial instrument data are taken from data from the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC), referring only to concessional flows of climate-related development assistance reported by OECD-DAC members. Section C of the summary and chapter III of the technical report uses 'bilateral finance' to refer only to concessional flows of climate-related development assistance reported by OECD-DAC members.

d. The annual average and thematic split of MDBs includes their own resources only, while the financial instrument data include data from MDBs and from external resources, due to the lack of data disaggregation.

37. **In 2017–2018, there continued to be a push to diversify modalities of access to climate finance.** In a 2019 survey of 105 respondents from 45 developing countries, 73 per cent identified finance from multilateral climate funds as the most challenging source of finance to access compared with private finance (62 per cent), MDBs and DFIs (30 per cent) and bilateral sources (17 per cent). Institutions in developing countries are increasingly able to meet fiduciary and environmental and social safeguards requirements for accessing funds. Data show a continued increase in the number of national implementing entities of the multilateral climate funds as well as an increase in the accreditation of civil society and private entities, with both trends largely driven by the GCF. Significant shares of climate finance approvals from the multilateral climate funds are programmed through multilateral accredited and implementing entities.

38. The management of climate finance, as well as the development and implementation of projects that it supports, necessarily entails costs. Often recovered through mechanisms such as administrative budgets and implementing agency fees, the degree of such costs varies across institutions by nature of their different approaches and delivery models. In 2017–2018, major multilateral climate funds spent USD 217 million on administration costs, while implementing entity fees amounted to USD 231 million. In general, the administration costs of climate finance management have tended to decrease over time. The alignment of administrative functions between funds (e.g. the GEF administration of the LDCF and the SCCF) can streamline management and disbursement mechanisms. This is essential in order to retain the trust that contributors and beneficiaries place in the funds. However, it must be balanced by the above-mentioned rise in implementing entities and associated costs.

39. The capacity of institutions to make strategic choices to use climate finance has long been recognized as important. Both the Adaptation Fund and the GCF have developed readiness programmes, supporting countries to plan for, access and deliver climate finance. Together these funds have approved over USD 285 million in readiness support. The GEF has instead incorporated capacity-building objectives into existing project funding through "enabling activities". Reviews of these programmes have endorsed the use of readiness support to build all aspects of the capacity required to mobilize finance for climate action, rather than a focus on supporting access to the multilateral climate funds.

40. **Ownership over the end-use of climate finance flows remains a critical factor in its effectiveness.** The broad concept of ownership encompasses the consistency of climate finance with national priorities, the degree to which national systems are used for both spending and tracking, and the engagement of a wide range of stakeholders. Financial needs are being increasingly articulated, but to date lack sufficient comparability of methods, including for costs, time frames and assumptions, in order to make an accurate assessment of the alignment of climate finance provision with such needs. Ministries of finance and planning are strengthening their commitments to engage in climate change planning, with national-level institutions playing a greater role through domestic tracking, monitoring and verification of climate finance.

41. **Impact reporting systems and practices for climate finance are maturing.** Mechanisms for monitoring the impact of climate finance may be relevant for the implementation of the enhanced transparency framework. While the reporting of results is slowly improving under the multilateral climate funds, MDBs do not include information on mitigation and adaptation outcomes in their joint reports and bilateral contributors have varied approaches to reporting on impacts. Emission reductions remains the primary impact metric for climate change mitigation, while adaptation impact continues to be measured primarily in terms of the number and type of people that benefit from projects. It remains difficult to accurately assess the quality of the impacts (i.e. outcomes) achieved, given that they are being presented in a multitude of formats and over varying timescales and are hard to verify.

42. **A number of decisions have strengthened the way in which gender issues are addressed in the UNFCCC process**. Gender-responsive public finance is likely to be more effective and efficient. Multilateral climate change funds have been front-runners in mainstreaming gender considerations in governance and operations. Those under the Financial Mechanism now have a mandate to include information on gender considerations in their annual reports to the COP. While advances are being made, there is scarce information on gender-responsive budgeting, suggesting that work remains to be done in integrating gender considerations on the ground.

43. **The drivers of climate finance flows can consist of both demand- and supply-side actions but may differ in terms of mitigation or adaptation objectives**. For mitigation finance, policy targets and support

mechanisms have played a major role in driving climate finance flows, such as in the role of long-term fixed prices in supporting renewable energy deployment to more recently purchasing incentives for EVs as well as bans on the sale of new combustion engine powered vehicles in the long term. Cross-cutting features of enabling environments have also proven to be significant drivers. These have been identified as currency stability of exchange rates, stability of policies and enforcement of contracts, particularly in driving finance toward sustainable land use, and maintenance of political will and support.

44. For adaptation finance, the role of national plans, standards and institutions take on more importance in driving finance flows than may be the case in mitigation finance. due to the importance of local, context-specific conditions. Building codes, design standards and disaster risk management guidelines play a role in furthering climate resilience within infrastructure and development investments. Furthermore, local and context-specific vulnerabilities require local-level data and information systems on risks to drive investment, particularly in agricultural adaptation activities.

45. **Although climate finance flows are increasing, they remain relatively small in the broader context of other finance flows, investment opportunities and costs**. Climate finance accounts for just a small proportion of overall finance flows as show in figure 4. The level of climate finance is considerably below what would be expected in view of the investment opportunities and needs that have been identified. However, although climate finance flows must obviously be scaled up, it is also important to ensure the consistency of finance flows as a whole (and of capital stock) with the long-term goals of the Paris Agreement, specifically with those set out in its Article 2.

46. **Financial flows and stocks in GHG-intensive activities remain concerningly high.** Fossil fuel investments amounted globally to USD 977 billion in 2017–2018, while fossil fuel subsidies amounted to USD 472 billion in 2018. Fossil fuel corporate capital expenditure at risk of becoming stranded amounted to USD 50 billion in 2018, while investments with deforestation risks amounted to USD 43.8 billion in 2017-2018, and net agriculture subsidies amounted to USD 619 billion per year on average from 2017-2019. Fixed assets in sectors linked to fossil fuel systems amounted to USD 32 trillion, real estate assets at risk in 2070 amounted to USD 35 trillion, and stranded assets worth USD 20 trillion are at risk out to 2050.

47. Given the scale and speed needed for the transformation to low-emission and climate-resilient development pathways, it is critical to consider climate finance flows within the context of broader finance flows. A sole focus on positive climate finance flows will be insufficient to meet the overarching objectives of the Paris Agreement. This does not mean that broader finance flows must all have explicit beneficial climate outcomes, but it does mean that they must integrate climate risks into decision-making and avoid increasing the likelihood of negative climate outcomes. Without this, the effectiveness of climate finance flows can be negated or even called into question.

D. Mapping information relevant to Article 2, paragraph 1(c), of the Paris Agreement

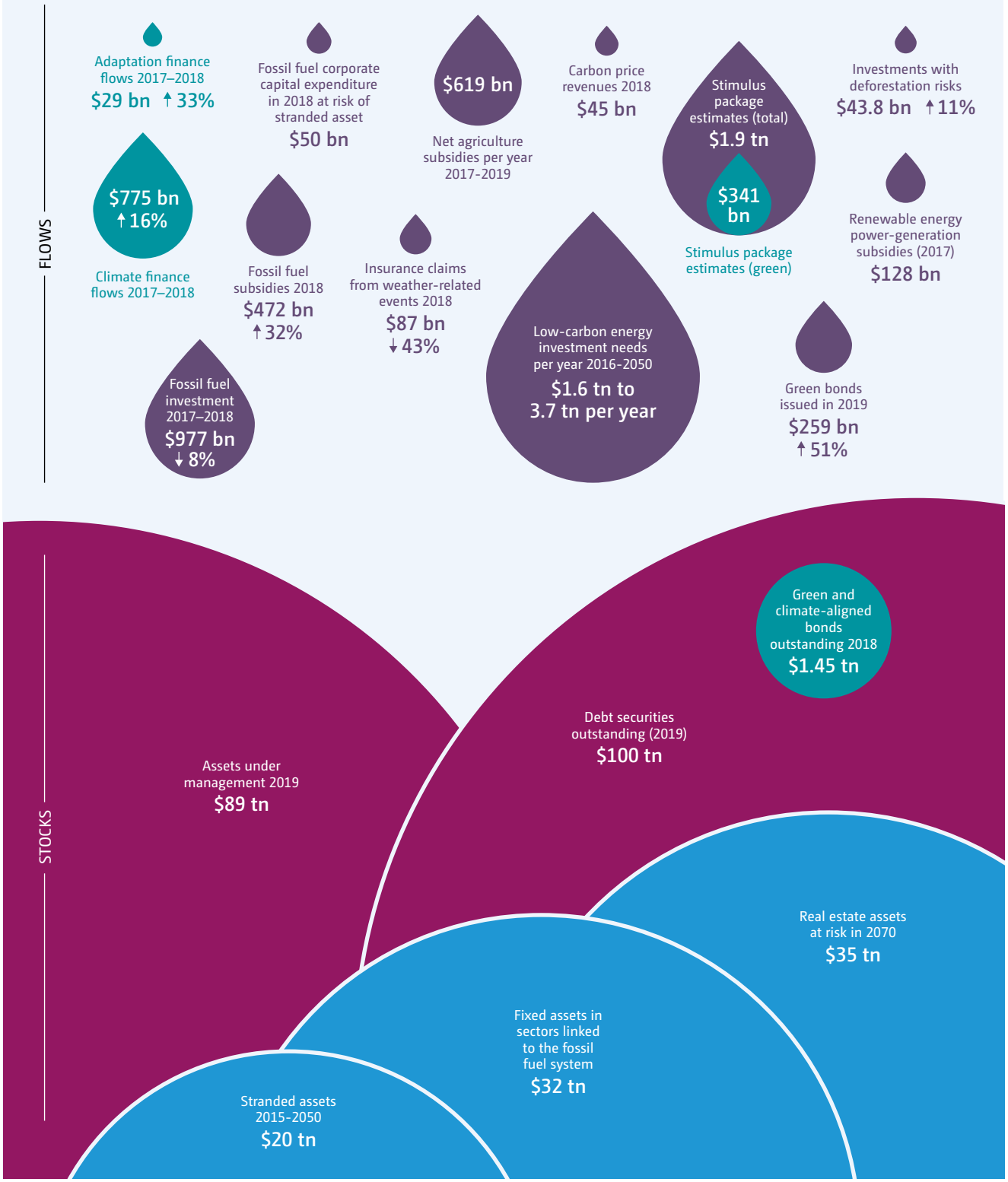
48. Article 2 of the Paris Agreement sets out three interlinked goals aimed at strengthening the global response to climate change in the context of sustainable development and efforts to eradicate poverty: (1) limiting the increase in global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the increase to 1.5 °C above pre-industrial levels; (2) increasing the ability to adapt to and foster resilience against the adverse impacts of climate change; and (3) in Article 2, paragraph 1(c), *making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development*. Article 2 states that the Paris Agreement will be implemented to reflect equity, and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

49. Although there is no dedicated process for responding to the goal set out in Article 2, paragraph 1(c), some Parties have articulated polices and measures in their long-term strategies or domestic policy frameworks that speak to the goal. Furthermore, both public and private sector institutions in the financial sector have articulated in their strategies efforts to align with the Paris Agreement and the goal in Article 2, paragraph 1(c). In the absence of a common vision among Parties on what information may be relevant, the aim of the mapping exercise was to capture how their actions meet the goal in Article 2, paragraph 1(c) and therefore what they consider relevant from their perspective, and it provided a number of key insights.

50. Significant growth in relevant initiatives has been apparent since the Paris Agreement, particularly in coalitions fostering collective commitments on climate

Figure 4

Global climate finance in the context of broader finance flows, opportunities and costs



Note: Data points are provided to place climate finance in context and do not represent an aggregate or systematic view. All flows are global and annual for 2018 unless otherwise stated. The representation of stocks that overlap is not necessarily reflective of real world overlaps. The flows are not representative of all flows contributing to the stocks. Climate finance flows are those represented in section B of the Summary and Chapter 2 of the fourth BA technical report.

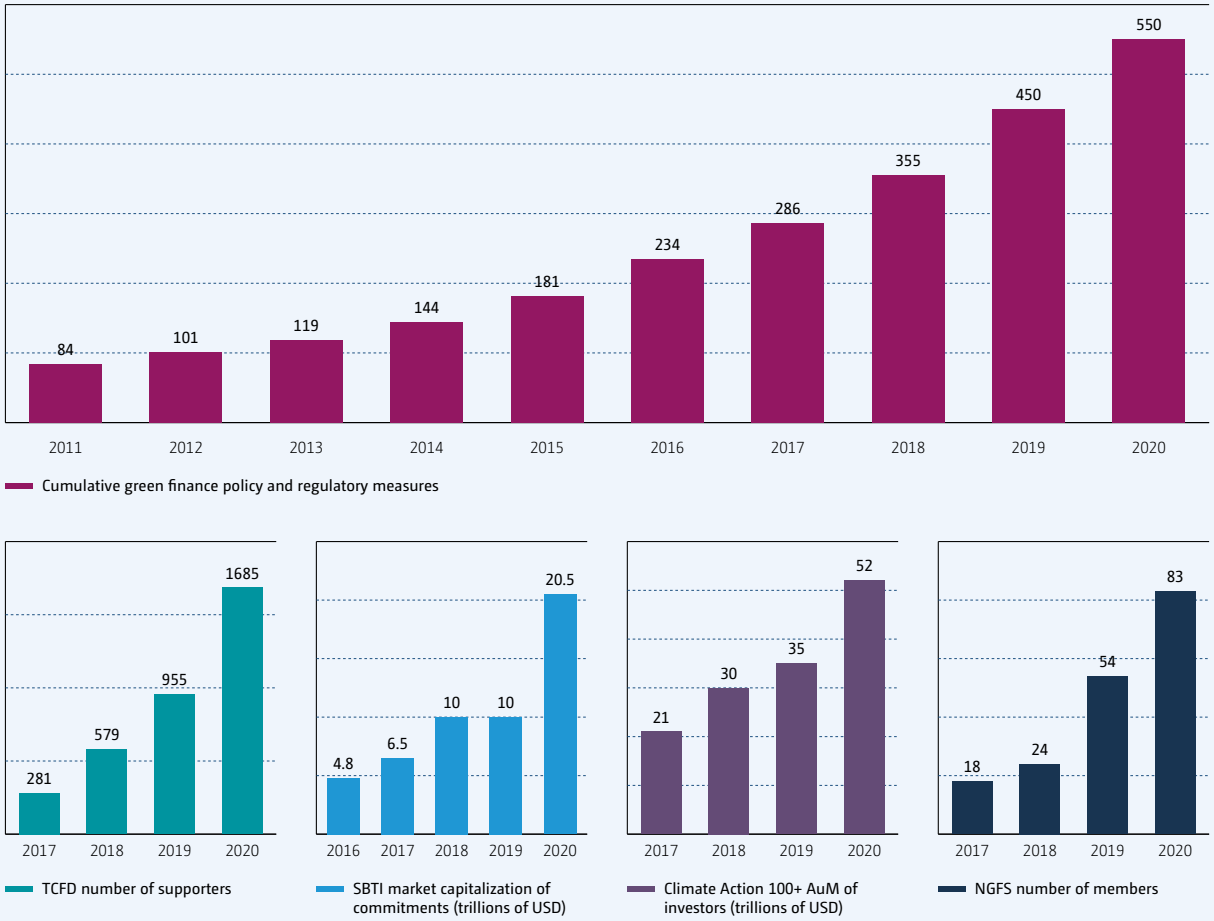
action. Activities relevant to Article 2, paragraph 1(c), in many instances, are found in practices, coalitions and initiatives that predate the Paris Agreement itself. Policy and regulatory measures on green finance have been recorded since 1980, although there has been a marked increase in such measures since the adoption of the Paris Agreement (see figure 5). This historical context is relevant as it provides evidence that even prior to adoption of the Paris Agreement, actors were developing sustainability- and climate-related financial instruments and regulations which represent foundations for action relevant to Article 2, paragraph 1(c), that is also integrated with national development goals. For example:

(a) 34 of 103 stock exchanges have sustainable bond listing processes;
(b) Investors managing USD 90 trillion have signed on to the Principles for Responsible Investment;
(c) 53 banks, representing over USD 37 trillion in assets, a quarter of global banking assets, have pledged to align their lending and investment portfolios with net-zero emissions by 2050, as part of the Net Zero Banking Alliance; and
(d) Over 40 institutional investors with USD 6.6 trillion in assets have pledged to align portfolios with net-zero emissions by 2050, as part of the Net-Zero Asset Owner Alliance

51. However, the Paris Agreement triggered a focusing of action whereby existing sustainability and climate-related finance initiatives sought to adopt objectives or activities that matched those of the Paris Agreement goals. At least 115 sustainability or climate-related financial initiatives exist that claim to be either directly or indirectly associated with contributing to the goals of the Paris Agreement. The majority relate to promoting new financial instruments that address funding needs for

Figure 5

Number of green finance policy and regulatory measures and growth of selected initiatives since the adoption of the Paris Agreement



Note: AuM=assets under management; TCFD=Task force for climate-related financial disclosures; NGFS=Network for Greening the Financial System; SBTi=Science-based targets initiative.

sustainable development and climate change. A smaller pool of approximately 31 initiatives are focused on greening financial systems – for example, the TCFD, the European Union High Level Expert Group on Sustainable Finance, and the NGFS.

52. Many activities across the stakeholder mapping exercise that explicitly refer to achieving the goals of the Paris Agreement and Article 2, paragraph 1(c), in particular are executed through collective initiatives and organizations. This highlights the importance of network effects, knowledge-sharing and common goal setting. In contrast, relatively few relevant actions by national Governments are framed their actions in the context of Article 2, paragraph 1(c). Particularly in developing countries, the ability to access international climate finance in the context of Article 9 is mentioned, as well as directing domestic finance flows towards achieving NDCs.

53. **Assessing the real-economy impact and the risk of greenwashing remains a challenge.** Efforts relevant to Article 2, paragraph 1(c) are widespread across all actors within the financial sector, with actions concentrated on defining their exposure to climate risks, and the economic opportunities linked to climate response measures. However, achieving the goal in Article 2, paragraph 1(c) related to low GHG emissions and climate-resilient development, set in the context of Article 2, depends on real economy actions that reduce emissions in line with temperature goals and help to develop climate resilience. Many actors in the financial sector operate at a number of steps removed from real economy activities, either through stock or bond trading, portfolio allocations, or micro-prudential supervision, that have little direct effect on real economy investment decisions, relative to banks lending to projects, corporations approving capital expenditure plans or governments announcing support incentives. Therefore, measuring the effective role of financial actors, in the context of Article 2, paragraph 1(c), is notable as a topic of debate among initiatives, including to which metrics are most important as indicators of success.

54. Several researchers highlight the absence of any independent critique of the motives and impacts of the numerous finance-related initiatives that have emerged since the adoption of the Paris Agreement. Such critical engagement will assist in assessing the real-world contributions of these many initiatives towards achieving consistency of finance flows and combating greenwashing in this context. Further, a plethora of initiatives offers the potential for incoherence and different levels of ambition in articulating how the goal in Article 2, paragraph 1(c) may be met.

55. The most recent initiatives include efforts of respective stakeholders to align with net zero emissions or 1.5 °C temperature rise pathways, with a focus on commitments for target setting and reporting, in contrast to earlier initiatives that focused on advocacy and high-level commitments.

56. **Trend toward activities with more stringent minimum requirements or mandatory regulations over voluntary activities.** Actors are largely adopting approaches in line with their institutional mandates, geographic reach and interpretation of how climate risks and opportunities affect and benefit their operations. To date, initiatives with the widest coverage and scope among financial actors are voluntary in nature, with often non-prescriptive commitments to principles. More recently, some initiatives are including mandatory implementation requirements against common timelines. Furthermore, some Governments have already signalled that mandatory exclusions or obligations are being placed on the institutions although these remain limited in number and geographic scope.

57. **More work needed to promote inclusivity and geographic representation.** A number of initiatives relevant to Article 2, paragraph 1(c) include representation from different regions and both developed and developing countries. For private finance actors, such representation is important, and it reveals how different relative starting points, capacity and skills gaps exist within coalitions that make common commitments. Further, although a significant number of initiatives were identified, many have yet to combine networks to achieve greater effect. Of the 115 partnerships identified of relevance to supporting the goals of the Paris Agreement, with up to 5,181 constituent members, the vast majority (75 per cent) are connected to only one partnership.

58. Inclusive and broad geographic representation is even more critical among relevant initiatives targeted at public finance actors, regulators and other country-focused actors such as financial centres. In these forums, the perspectives of different regions, financial systems and country priorities is important to be reflected in how common goals are articulated, particularly as the activities of these actors support and facilitate the achievement of the goal in Article 2, paragraph 1(c) as well as their country NDCs.

59. **Pursuing consistency requires consideration of how finance targeted at currently GHG-intensive activities can support pathways.** A focus on individual financing or investment decisions that are consistent

with a pathway towards low GHG emission and climate-resilient development is not straightforward owing to the significant potential range of what pathways may be followed for achieving the broader goals in Article 2. The trend toward developing climate, green or sustainable finance taxonomies, as seen across multiple public actor initiatives, can support the identification of activities that are consistent with such pathways, but may risk excluding necessary investment in high-GHG emission sectors or activities that can support the overall transition to such pathways. These may be in areas where activities that are consistent are not yet available at scale owing to technological innovation (e.g. steel and/or cement processes), where activities are needed to enable the transition (e.g. financing of mining activities, road building), or where financing is needed to wind down or responsibly manage the retiring of high GHG emissions activities and transition communities away from their reliance (e.g. coal phase-out policies and subsidies).

60. Transition finance taxonomies and transition bonds are being developed for private finance actors to finance for example, transitional activities in the context of financing just transitions, which implies projects that meet certain conditions, such as displacing more carbon-intensive options compared with industry norms; and enabling wider application or integration of less carbon-intensive options.

61. **Further consideration of climate-resilient development pathways are necessary to complement existing approaches.** The mapped approaches include a strong focus on actions linked to achieving the goal in Article 2, paragraph 1(a) of the Paris Agreement, namely financing low greenhouse gas related investments, and to mitigating the physical and transition related risks of shifting from high- to low-GHG development trajectories. There appears to be limited evidence of the degree to which financial actors are aligning their investment mandates with climate resilience goals linked to Article 2, paragraph 1(b) of the Paris Agreement. There is a view that focusing on proper climate-related risk disclosure should result in better, more resilient investment and financing decisions as an end in and of itself, while other views have recognized the existing gaps in guidance and understanding on how to proactively engage on this element.

62. **Stakeholders may take action across a number of areas to support advancing efforts in relation to the goal in Article 2, paragraph 1(c).** These include:

(a) In public policy and finance, promoting opportunities to make sustainable recovery packages consistent with the goals of the Paris Agreement in the short term and setting in place financial policies and regulations for achieving net zero commitments in the long-term.
(b) Ensuring that just transition financing is incorporated into approaches to align action with the goals of the Paris Agreement or into classifications of consistency with those goals, including in supporting vulnerable developing countries at risk of climate impacts in gaining access to capital to support their climate-resilient development, and in supporting the shift of trade flows away from economic activities that are inconsistent with those goals.
(c) Further clarifying the differences or complementarities between climate finance related to Article 9 of the Paris Agreement and the long-term goal under Article 2, paragraph 1(c).

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AF	Adaptation Fund
AFB	Adaptation Fund Board
AFD	Agence Francaise de Development
AfDB	African Development Bank
AGN	African Group of Negotiators
AIIB	Asian Infrastructure Investment Bank
AILAC	Independent Association of Latin America and the Caribbean
Annex I Party	Party included in Annex I to the Convention
Annex II Party	Party included in Annex II to the Convention
AODP	Asset Owners Disclosure Project
AOSIS	Alliance of Small Island States
ASAP	Adaptation for Smallholder Agriculture Programme
AUM	assets under management
BA	biennial assessment and overview of climate finance flows
BCBS	Basel Committee on Banking Supervision
BCG	Boston Consulting Group
BEV	battery electric vehicle
BIS	Bank for International Settlements
BNEF	Bloomberg New Energy Finance
BR	biennial report
BR4	fourth biennial report
BRICS	Brazil, Russia, India, China and South Africa
BUR	biennial update report
CAF	Development Bank of Latin America
CBI	Climate Bonds Initiative
CCCA	Collective Commitment to Climate Action
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDM	clean development mechanism
CDP	Carbon Disclosure Project
CESEE	Central, Eastern, and South-Eastern Europe
CFU	Climate Funds Update
CIF	Climate Investment Funds
CISL	Cambridge Institute for Sustainability Leadership
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
COP	Conference of the Parties
CO2	carbon dioxide
CO2 eq	carbon dioxide equivalent
CPEIR	climate public expenditure and institutional review
CPI	Climate Policy Initiative
CPIC	Coalition for Private Investment in Conservation
CRGE	Climate Resilient Green Economy
CRIN	Charities Responsible Investment Network
CRS	Creditor Reporting System
CTF	common tabular format
DAC	Development Assistance Committee
d-CPEIR	district-level Climate Public Expenditure and Institutional Review
DFI	development finance institution, including bilateral, regional or national development banks
DTU	Technical University of Denmark
EBRD	European Bank for Reconstruction and Development
EDFI	European Development Finance Institutions
EIB	European Investment Bank
EIG	Environmental Integrity Group
EMPEA	Emerging Markets Private Equity Association
ESG	environmental, social and governance
EC	European Commission
EU	European Union
EV	Electric vehicle
FC4S	Financial Centres for Sustainability
FCPF	Forest Carbon Partnership Facility
FDI	foreign direct investment
FIP	Forest Investment Program
FONERWA	Rwanda's Green Fund
Frankfurt School	Frankfurt School of Finance and Management
FSB	Financial Stability Board
FS-UNEP Centre	Frankfurt School – UNEP Collaborating Centre for Climate & Sustainable Energy Finance
GABC	Global Alliance for Buildings and Construction
GABV	Global Alliance for Banking on Values
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GDP	gross domestic product
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environment Facility
GFANZ	Glasgow Financial Alliance for Net Zero
GFLAC	Group for Climate Finance in Latin America and the Caribbean
GHG	greenhouse gas
GICCC	Global Investor Coalition on Climate Change
GIIN	Global Impact Investing Network
GIZ	German Agency for International Cooperation
GNI	gross national income
GPFI	Global Partnership for Financial Inclusion
GRI	Global Reporting Initiative
GTREI	Global Trends in Renewable Energy Investment
G7	Group of 7
G20	Group of 20
IADB	Inter-American Development Bank
IAIS	International Association of Insurance Supervisors
IAR	international assessment and review
IBRD	International Bank for Reconstruction and Development
ICA	international consultation and analysis
ICD	Islamic Corporation for the Development of the Private Sector
iCI	Initiative Climat International

I4CE	Institute for Climate Economics
IDBG	Inter-American Development Bank Group
IDFC	International Development Finance Club
IEA	International Energy Agency
IEN	Intentional Endowments Network
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IIGCC	Institutional Investor Group on Climate Change
IISD	International Institute for Sustainable Development
IMF	International Monetary Fund
INFFs	integrated national financing frameworks
INDC	intended nationally determined contribution
INGO	international non-governmental organization
INSPIRE	International Network for Sustainable Financial Policy Insights, Research and Exchange
IPCC	Intergovernmental Panel on Climate Change
IPSF	International Platform on Sustainable Finance
IRENA	International Renewable Energy Agency
IsDB	Islamic Development Bank
JBIC	Japan Bank for International Cooperation
KfW	*Kreditanstalt für Wiederaufbau* (Reconstruction Credit Institute)
KPI	key performance indicator
LDC	Least Developed Country
LDCF	Least Developed Countries Fund
LDC Group	Least Developed Countries Group
LT-LEDS	long-term low-emission development strategies
MDB	multilateral development bank
MMR	Monitoring Mechanism Regulation
MPG	modalities, procedures and guidelines
MSME	micro, small and medium-sized enterprises
NAMA	nationally appropriate mitigation action
NAP	national adaptation plan
NAPA	national adaptation programme of action
NC	national communication
NDA	national designated authority
NDB	New Development Bank
NDC	nationally determined contribution
NeST	Network of Southern Think Tanks
NGFS	Central Banks and Supervisors Network for Greening the Financial System
NGO	non-governmental organization
non-Annex I Party	Party not included in Annex I to the Convention
NZEB	nearly zero-energy building
ODA	official development assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OECD DAC	Organisation for Economic Co-operation and Development Development Assistance Committee
PSI	Principles for Sustainable Insurance
Research Collaborative	Research Collaborative on Tracking Finance for Climate Action
OOF	other official flows
RINU	Responsible Investment Network – Universities
PACTA	Paris Agreement Capital Transition Assessment
PCAF	Partnership for Carbon Accounting Financials
PHEV	plug-in hybrid electric vehicle
PMR	Partnership for Market Readiness
PPCR	Pilot Program for Climate Resilience
PRI	Principles for Responsible Investment
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para.70)
S&P	Standard and Poor's
SASB	Sustainability Accounting Standards Board
SBN	Sustainable Banking Network
SBSTA	Subsidiary Body for Scientific and Technological Advice
SBTi	Science-Based Targets initiative
SCCF	Special Climate Change Fund
SCF	Standing Committee on Finance
SDA	sectoral decarbonization approach
SDG	Sustainable Development Goal
SIDA	Sweden's International Development Agency
SIDS	small island developing States
SME	small and medium-sized enterprise
SNGWOFI	Observatory on Subnational Government Finance and Investment
SREP	Scaling Up Renewable Energy Program in Low Income Countries
SSE	Sustainable Stock Exchanges
TCFD	Task Force on Climate-related Financial Disclosures
TCLP	Transformational Change Learning Partnership
TNA	technology needs assessment
TOSSD	Total Official Support for Sustainable Development
TPI	Transition Pathway Initiative
UCLG	United Cities and Local Government
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP Centre	UNEP Collaborating Centre for Climate and Sustainable Energy Finance
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCC RCC	UNFCCC Regional Collaboration Centres
UNGC	United Nations Global Compact
UN-REDD Programme	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
V20	Vulnerable Twenty
WBG	World Bank Group
WRI	World Resources Institute
WWF	World Wildlife Fund

INTRODUCTION

Background and objectives

1. The fourth BA comprises two parts:

- a summary prepared by the SCF, which is included in the its annual report to the COP at its twenty-sixth session and to the CMA at its third session, and,
- a technical report consisting of a metadata analysis of existing work and available data that was prepared by external experts under the guidance of the SCF and presented in an interactive format on the BA web page[1].

2. As in previous BAs, the preparation of the fourth BA was guided by mandates given to the SCF by the COP and the CMA.[2] Most recently, COP24 encouraged the SCF to take into account the best available science in future BAs and requested the use of established terminology in the provisions of the Convention and the Paris Agreement in relation to climate finance. COP24 also requested the SCF to map, every four years, as part of the BA, the available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof. COP25 and CMA2 encouraged the SCF to the extent possible to present disaggregated information on data availability and gaps by sector and invited the SCF to consider Parties views on operational definitions of climate finance in the context of preparing the fourth BA. In addition, the fourth BA was prepared with due consideration to the outcomes of the Paris Agreement, particularly provisions related to the purpose of the framework for transparency of support[3], and the implementation of its modalities, procedures and guidelines.[4]

3. Given the context above, the objectives of the fourth BA are to:

- Take stock of efforts aimed at improving the methodologies used for measuring, reporting and verifying public and private climate finance flows – including the use of operational definitions of climate finance – following recommendations made in previous BAs;
- Provide an updated overview of global climate finance flows, including finance flows from developed to developing countries as well as other climate-related finance flows based on available data;
- Consider and assess the implications of climate finance flows, including composition, purpose and emerging trends relevant to the objectives of the Convention, as well as the long-term goals set out in the Paris Agreement;
- Provide an overview on the financial instruments used, its implications and future trends, and how they assist in enhancing the flows from developed to developing countries;
- Map available information relevant to making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development;
- Identify data gaps as well as ways to strengthen, enhance and improve methodologies for reporting and verifying financial information.

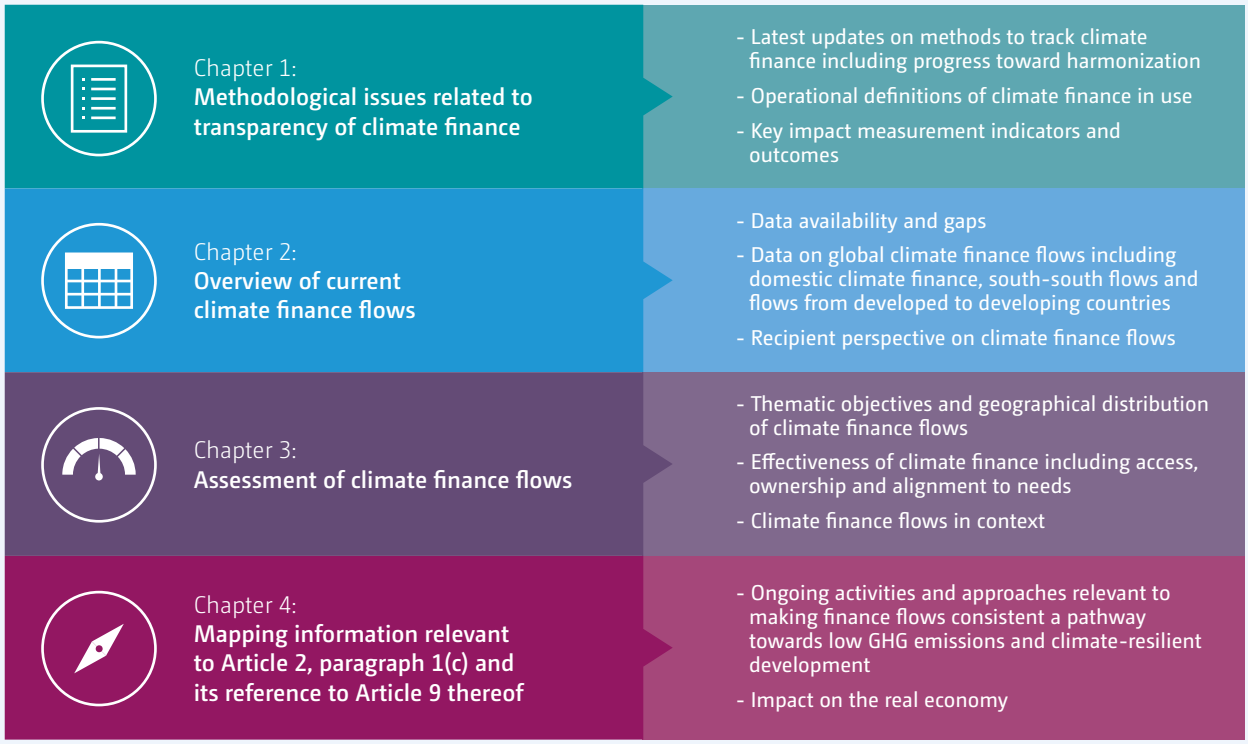
Scope

4. This report focuses on climate finance flows for 2017 and 2018 and identifies trends from previous years where possible. It also maps information relevant to achieving the long-term goal in Article 2, paragraph 1(c) of the Paris Agreement, which refers to making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development. It draws data from a wide range of sources of information, including but not limited to BRs and BURs, supplemented with other data from the OECD, international financial institutions, United Nations organizations, academia, NGOs, think-tanks, and the private sector in order to enhance the comprehensiveness of this report and provide insights into climate finance flows. The report has also benefited from qualitative information from various sources, including responses to the call for evidence issued by the SCF in the November quarter of 2019[5] and a wide range of reports that explore topics related to climate finance.

1) Available at: https://unfccc.int/topics/climate-finance/resources/biennial-assessment-of-climate-finance
2) Decisions 2/CP.17, paragraph 121(f), 1/CP.18, paragraph 71, 5/CP.18, paragraph 11, 3/CP.19, paragraph 11, 4/CP.24, paragraphs 4,5,10, and 6/CP.25, paragraphs 9 and 10 and decision 5/CMA2, paragraphs 9 and 10.
3) Article 13, paragraph 6, Article 9, paragraph 7.
4) Decision 18/CMA.1.
5 Available at https://unfccc.int/sites/default/files/resource/Call_for_evidence_2020BA.pdf.

Figure 0.1

Overview of the scope and content of information within the Fourth BA



5. Chapter I considers methodological issues related to transparency of climate finance, including the latest developments and improvements on the measurement, reporting and verification of climate finance flows, as well as views on operational definitions of climate finance in use and updates on impact metrics and outcomes.

6. Chapter II provides an updated overview of current climate finance flows over the years 2017 and 2018, identifying emerging and new trends over previous years. The chapter compiles information from multiple sources of data to arrive at aggregate estimates for global climate finance flows (public and private), flows from developed to developing countries (public and available data on mobilized private finance through public interventions), domestic climate finance and South–South cooperation, as well as the other climate-related flows for the period.

7. Chapter III assesses the climate finance flows presented in chapter II and considers the implications of their purpose, composition, and effectiveness, as well as access and emerging trends relevant to international efforts to address climate change.

8. Chapter IV maps relevant information on making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development.

9. Throughout each chapter, efforts have been made to respond to SCF recommendations entailed in previous BAs as relevant, as show in Figure 0.2.

Approach used in the preparation of the fourth BA

10. The fourth BA technical report is the result of metadata analytical work including a literature review combined with four outreach webinars organized on 7 April, 13 October, 20 October and 6 November 2020 involving data providers and representatives of organizations specializing in climate finance tracking and reporting such as MDBs, DFI, including bilateral, regional or national development banks, international organizations, research institutions, think tanks and private sector financial institutions networks.[6] Valuable inputs have been provided by both Parties and non-Party

6 Information on these events are available here https://cop23.unfccc.int/topics/climate-finance/resources/biennial-assessment-of-climate-finance.

Figure 0.2

Follow-up on recommendations from previous BAs, where relevant

Area of recommendation	2018 BA recommendation	Relevant section(s)
Improve transparency of reporting of climate finance provided and received	(a), (b), (c), (d)	1.3
Improve data coverage, granularity and tracking of flows from all sources including flows from developing country Parties, IFIs, and private finance data providers	(e), (f), (g), (h)	1.2, 2.2–2.5
Update data sets and information relevant to Article 2, paragraph 1(c)	(i), (q)	1.6, 2.6, 4
Alignment of climate finance with national needs, plans, climate change frameworks and priorities, enhancing country ownership	(j), (l), (p)	3.2–3.3
Balance of funding for mitigation and adaptation	(l)	3.2
Uptake of available resources to strengthen institutional capacities for programming climate action and tracking climate finance	(k)	3.3
Improve tracking and reporting on impacts of climate finance, including incorporation of climate-proofing and climate resilience measures in line with new available scientific information	(n), (o)	1.5, 3.3
Improve tracking and reporting on gender-related aspects	(m)	1.5, 3.3

stakeholders in response to the call for evidence issued by the SCF in November 2019.[7]

The term "climate finance" as used in this report

11. As was the case with the 2014, 2016 and 2018 BAs, the term "climate finance" refers to the financial resources dedicated to adapting to and mitigating climate change globally, including in the context of financial flows to developing countries. Global climate finance is important for making progress towards the objective of the Convention and the goals set out in the Paris Agreement.

Work undertaken to improve the quality and coverage of data

12. Additional work was undertaken with a view to improving the quality and coverage of the data with the objective of contributing to the progressive improvement of information on climate flows. This includes:

- Efforts to expand data coverage that was not captured previously and to integrate new data retroactively, where possible, to allow for trend comparisons. This includes in particular new data on finance flows for EV charging infrastructure, non-energy infrastructure investments, project-level data from reporting on green bonds, and blended finance transaction data.
- A review of the current status of tracking climate finance in domestic public expenditures that provide information on climate finance flows

Approach taken in organizing information and data

13. Climate finance data were aggregated and assessed for the period 2017–2018. The data were classified as follows:

- Global climate finance flows: As in previous BAs, global climate finance estimates were gathered against an operational definition of climate finance, namely flows whose expected effect is aimed at reducing emissions or enhancing sinks of GHG, and/or reducing vulnerability of and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts. Efforts are made to avoid double counting finance flows by focusing on project level activities and the primary financing of a new physical asset or activity. A mix of full investment cost and incremental or component costs are included based on type of activity and data source used and in general err on the side of conservativeness. Estimates cover public and private finance, international and domestic finance. The integration of new data coverage and sources of data required recalculating earlier years estimates on climate finance to identify trends.

7 As available at https://unfccc.int/topics/climate-finance/resources/standing-committee-on-finance-info-repository#eq-5.

Therefore, data reported for years 2014-2016 may differ from previous BAs.

- Climate finance flows from developed to developing countries: The report draws primarily from the reporting of climate funds under the UNFCCC as well as BR4 reports of Annex II Parties in estimating climate finance provided through bilateral and multilateral channels. These data are complemented by commitments by MDBs from their own resources to projects in developing countries as well as other multilateral climate funds that may be attributable to Annex II Parties. Data on bilateral and multilateral flows to developing countries from the OECD DAC CRS, IDFC and other databases complement these data sources to provide more granularity with regard to sectors and themes. Estimates of mobilized private finance flows in developed countries were gathered from MDBs, IDFC and OECD analytical work but do not differentiate between private finance originating in developed countries and private finance mobilized locally in developing countries.

14. The use of the terms "developed and developing countries" or "South-south" in this report are used by the authors to describe data or country classifications from various sources. Please refer to Annex A for a definition of different country classifications used by various data sources. For the purpose of the overview of climate finance in the BA, various data sources are used to illustrate flows from developed to developing countries, without prejudice to the meaning of those terms in the context of the Convention and the Paris Agreement, including but not limited to Parties included in Annex II/Annex I to the Convention to Parties not included in Annex I to the Convention and MDBs; OECD members to non-OECD members; OECD DAC members to countries eligible for OECD DAC official development assistance; and other relevant classifications. For South-south, this refers to non-Annex I, non-OECD DAC members and other similar classifications.

Challenges and limitations

15. In compiling estimates of climate finance flows, efforts have been made to ensure they are based on activities in line with the operational definition of climate finance adopted in the BA 2014 and to avoid double counting (see section 2.1 for further information). Challenges were nevertheless encountered in collecting, aggregating and analysing information from diverse sources with varying degrees of transparency.

16. When determining the amounts to be reported as climate finance, different data providers and aggregators apply their respective operational definitions of climate finance. Definitions for what should be considered as mitigation or adaptation finance follow generally common views although differ when it comes to specific activities where exclusion lists or criteria may apply, or for certain financial instruments and approaches to public and private finance flows (see section 1.4). Amounts reported may also differ between specific climate finance amounts according to a methodology and financial flows where climate objectives are one of the goals of the activity. Methodologies on climate-specific finance also range from reporting whole investments to incremental cost calculations or weighted calculations based on climate relevance. The point of measurement of the climate finance flow may also differ such as in project financial close decisions on financial commitments, to disbursements of finance, to budget allocations in the case of some domestic public expenditures.

17. Classifications of data such as geographic regions or levels of granularity are also not uniform across data sources. Energy efficiency estimates do not include data by public or private actors, financial instruments or country-level data. Other data sources such as in renewable energy provide activity-level data but may employ country- and technology-level assumptions on finance flows to fill data gaps. In aggregating data from various sources to aggregate global climate finance flows, approaches are used to ensure any potential overlaps in coverage are avoided.

18. Significant data gaps remain for activities limiting completeness of the data and interpretations of the relative share of global climate finance going to different themes (e.g. mitigation, adaptation) or different sectors. Adaptation finance in particular from private finance sources remains severely limited. Potential climate mitigation and adaptation activities in the agriculture, forestry, land use, water and waste sectors also remain limited to a few data sources. Climate finance committed by governments in public expenditure also remains relatively underreported. As with previous BAs no aggregation of data from different sources for finance from developed to developing countries is carried out due to the aforementioned challenges and limitations.

Chapter 1

METHODOLOGICAL ISSUES RELATED TO TRANSPARENCY OF CLIMATE FINANCE

The consistency of reporting on climate finance under the Convention is improving

23 Annex II Parties and 13 other Annex I Parties
provided information on financial support provided for the years 2017 and 2018

90 per cent
of Biennial Update Reports from non-Annex I Parties provided information on climate finance received

Availability of domestic public climate finance data is increasing, with more countries establishing climate budget tagging systems

13 countries
have regular tracking in national budgets

5 countries
with methodologies in development

Methods to track private climate finance have increased accuracy and coverage

- ✓ Estimating mobilised climate finance from public interventions
- ✓ Electric vehicle charging infrastructure
- ✓ Water, waste and other infrastructure projects
- ✓ Green bonds
- ✓ Blended finance transactions

Operational definitions of climate finance in use generally reflect a common understanding of what is considered mitigation or adaptation finance, but differ on the details of sector-specific activities, certain financial instruments and approaches to public and private finance flows

1.1 Introduction

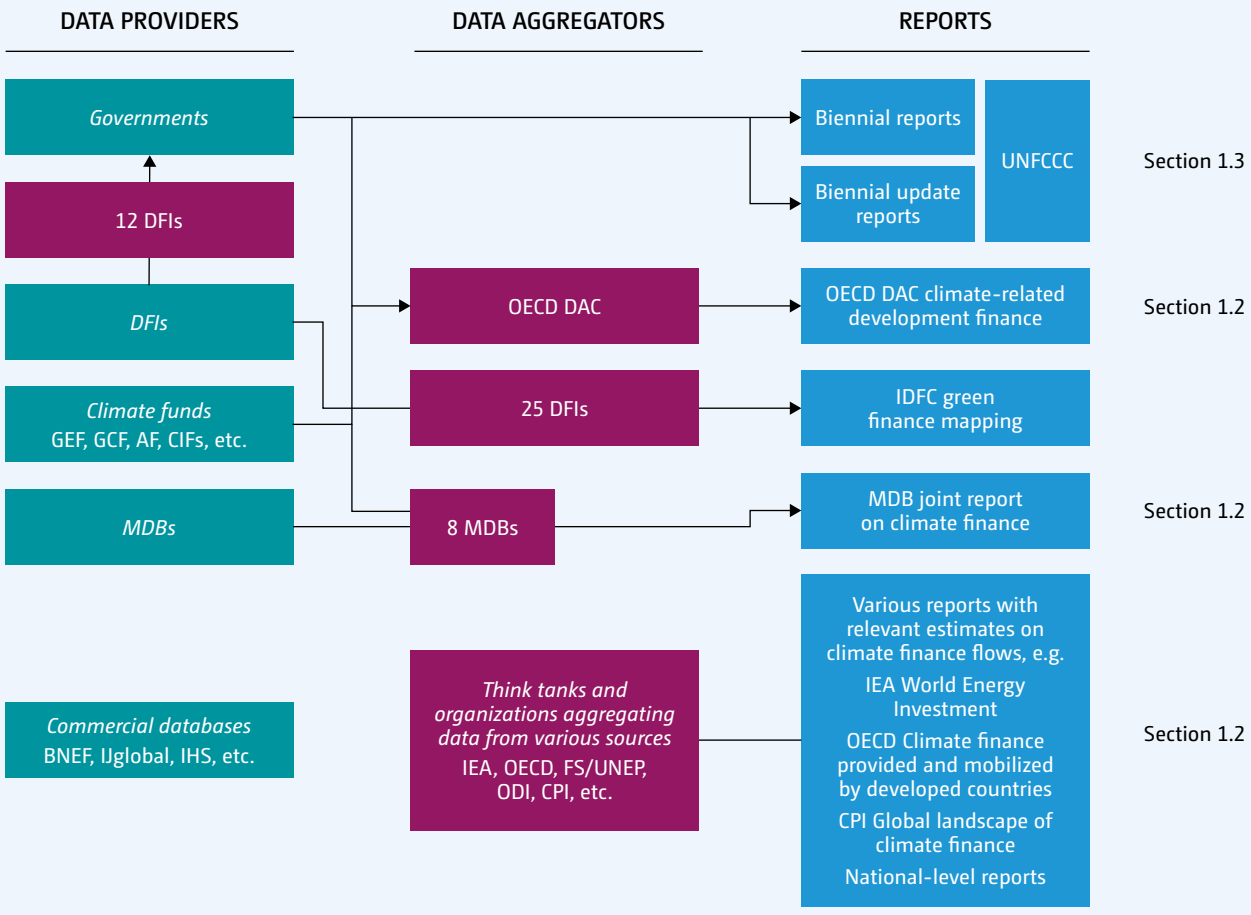
19. This chapter provides an update on ongoing work related to the measurement, reporting and verification of climate finance information since the publication of the 2018 BA. The chapter responds to a request by the COP for the SCF to take into consideration relevant work by other bodies and entities on the measuring, reporting and verification of support and the tracking of climate finance[8] and to consider ways of strengthening methodologies for reporting climate finance.[9] Furthermore, the COP requested the SCF to consider ongoing technical work on the operational definitions of climate finance.[10]

20. Information on methodologies for measuring, reporting and reviewing climate finance is useful to the UNFCCC process, particularly in the light of ongoing work related to the implementation of the enhanced transparency framework under the Paris Agreement. This includes work on the development of CTFs for the electronic reporting of information on the support mobilized and provided by developed country Parties to developing country Parties and the support needed and received by developing country Parties.

21. The transparency, accuracy, completeness, comparability and consistency principles set out in decision 1/CP.21, particularly the principles of transparency and consistency referred to in Article 9,

Figure 1.1

Data providers, aggregators and reporters of climate-related finance estimates



Notes: Dashed arrows indicate formal reporting processes, for example through the UNFCCC, OECD DAC or joint reporting by MDBs and IDFC. Some DFIs report data to their national governments to be included in reporting to the UNFCCC or OECD DAC.

8) Decision 1/CP.18, para. 71.
9) Decision 5/CP.18, para. 11.
10) Decision 3/CP.19, para. 11, and decision 11/CP.25, para. 10.

paragraph 7, of the Paris Agreement, underscore the need for continued efforts to enhance the transparency and harmonization of reporting approaches and operational definitions of climate finance over time. Such transparency and harmonization in reporting is important for generating comparable data that ensures the transparency of support provided and received and that provides a full overview of aggregate financial support to inform the first global stocktake in 2023 under Article 14 of the Paris Agreement, of which the BA is one of the identified sources of information.[11] This harmonization is also relevant in the light of Article 2, paragraph 1(c), of the Paris Agreement.

22. Reporting on climate-related finance is undertaken by a variety of different actors, for different purposes and using different processes. Actors involved in climate-related finance reporting include providers of raw data: both public and commercial data providers, aggregators of data from various sources, publishers of climate finance estimates and Parties themselves, which report on climate finance support provided, mobilized and received (see figure 1.1). Some actors follow formalized processes for reporting on climate finance, such as through the UNFCCC biennial reporting, statistical systems and standards to report mainstreaming of climate finance such as through the OECD DAC common reporting system, or using dedicated methodologies developed by the MDBs and IDFC.

23. This diversity in approaches can compound the difficulty in developing aggregate estimates of volumes of climate finance. It is therefore important to understand the methods to account for the financial resources provided and mobilized and the ongoing efforts aimed at harmonizing reporting approaches in terms of transparency, accuracy, consistency, comparability and completeness. Furthermore, it is important to understand how and which accounting methods and reporting approaches facilitate the provision of disaggregated information, including by channel, thematic distribution (e.g. mitigation, adaptation and cross-cutting), funding source, financial instrument and status (e.g. committed and disbursed).

24. Chapter 1 is structured as follows:

- Section 1.2 provides updated information on methodologies for tracking climate finance flows from various data providers and aggregators to report on climate finance from public sources, private finance mobilized by public interventions and private finance flows at both the international and domestic level;
- Section 1.3 includes updated information on reporting and reviewing climate finance under the Convention;
- Section 1.4 presents information on operational definitions of climate finance in use;
- Section 1.5 contains information on emerging methodologies for measuring mitigation and adaptation finance outcomes;
- Section 1.6 provides insights into emerging practices and metrics relevant to tracking progress by different actors towards the goal outlined in Article 2, paragraph 1(c), of the Paris Agreement.

1.2 Updates and trends in methodologies to track climate finance

1.2.1 Methods to track international public climate finance

OECD DAC climate-related development finance database

25. The OECD DAC climate-related development finance database includes bilateral flows from governments, their development agencies and DFIs; multilateral outflows from MDBs and multilateral climate funds (including the Financial Mechanism of the UNFCCC, i.e. the GCF and the GEF); and finance provided through philanthropic foundations that report through the statistical system.

26. DAC members, other bilateral donors and a number of multilateral institutions use the Rio markers methodology to identify activities targeting climate mitigation and/or adaptation objectives. For each climate-relevant activity, the climate objective is marked as being either a “principal” or “significant” objective. OECD developed a handbook (OECD, 2016) to summarize methodological information on the mitigation and adaptation markers, which includes agreed definitions as well as reporting instructions to provide guidance to support activity-level screening. A guidance table developed by the DAC secretariat has been available since 2017 to facilitate use of the Rio markers.[12]

27. The DAC statistical system allows for climate-related development finance to be considered from

11) Decision 19/CMA.1, para. 36(d).

12) The handbook and guidance table are available at http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm.

two perspectives. A "recipient perspective" captures development finance to developing countries that are eligible for ODA, from both bilateral and multilateral providers.[13] The "provider perspective" is a measure of bilateral providers' effort, comprising their bilateral contributions and their contributions to international organizations. Under the provider perspective, data include bilateral activities targeting climate change objectives identified using the Rio markers as well as the climate share of their core contributions (inflows) to international organizations, referred to as "imputed multilateral contributions".[14] Annexes B and C contain a description of the Rio markers methodology and of the reporting approach under the OECD DAC.

28. The reporting of DAC members is subject to annual data quality reviews by the OECD DAC secretariat, and results are shared with the OECD DAC Working Party on Development Finance Statistics. Data reported by DAC members are also periodically subject to quality reviews specifically focusing on Rio markers (e.g. mitigation and adaptation, including any possible inconsistencies). The most recent reviews of both the adaptation and mitigation policy markers were conducted in 2020 (OECD, 2020b).

29. When reporting to the UNFCCC on climate finance in their BRs, OECD DAC members draw on their climate-related development finance reporting to the OECD DAC but adjust the amounts reported to better reflect the financial contribution of the respective activities to the objectives of the Convention (OECD, 2020d). To further increase the transparency of information reported by DAC members to the UNFCCC, the OECD DAC secretariat introduced in 2018 a biennial voluntary survey to collect information from DAC members on their approach to adjusting amounts reported to the UNFCCC. Eleven DAC members responded to the survey in 2018 and twenty-one members responded in 2020. For the climate finance data over 2017–2018 reported to UNFCCC, eighteen members indicated that they took a "fixed coefficient" approach to activity amounts linked to Rio markers (e.g. a member reports 100 per cent of flows marked as principal and 50 per cent of flows marked as significant to UNFCCC). The rules applied differed among members, with 85 per cent to 100 per cent applied to financing amounts of activities marked as principal and from 0 per cent to 100 per cent applied to activities marked as significant. Three members indicated that they use an "activity-level" approach, which involves reviewing each activity to quantify the amount reported to UNFCCC.[15]

Methodology used by MDBs for tracking and reporting on climate finance

30. Since 2018, IsDB and AIIB have joined the MDB group in reporting climate finance flows for mitigation and adaptation activities annually.[16] The MDB climate finance tracking group developed the methodology for the joint report, and two workstreams, one on mitigation finance and the other on adaptation finance, and continuously update the methodology. The adaptation finance methodology captures incremental cost, while the mitigation finance methodology captures financing based on a list of activities in sectors and subsectors that reduce GHG emissions and are compatible with low-emission development.

31. MDBs report on climate finance in terms of their own commitments, finance from external sources channelled through and managed by them, and climate co-financing by non-MDB actors.[17] As financial commitments are reported at the time of board approval or the signing of a financial agreement, the data are therefore based on ex ante estimations and no revisions are issued when changes to a project either increase or decrease the climate financing component. The financial instruments covered include advisory services, equity, grants, guarantees, investment loans, lines of credit and policy-based lending. All developing and emerging economies included in the remit of the MDBs are covered.

32. MDBs do not have a common standard procedure to review the quality of their data. In a few instances, this is owing to the proprietary nature of some private information. However, individual MDBs may have their own internal processes to facilitate data reviews and quality control, together with independent third-party evaluations. Additionally, a dedicated working group facilitates the exchange among MDBs of information 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.

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13) In the OECD DAC context the "recipient perspective" refers to the development finance flows from different sources directed to countries eligible to receive ODA.

14) Imputed multilateral shares are published online. They are available on the OECD DAC website and at http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm. In addition to MDBs and multilateral climate funds, the IPCC and UNFCCC, recent additions to the list include AIIB, the CAF, the GCF, the Global Green Growth Institute.

15) The results of the survey are available at http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm.

16) The original six MDBs are ADB, AfDB, EBRD, EIB, IDBG and WBG. IsDB joined the group in 2018 and AIIB in 2020.

17) External resources include trust-funded operations, such as those funded by bilateral agencies, dedicated climate finance funds, such as the CIF and the GCF, and climate-related funds under the GEF, EU blending facilities and others. See (AfDB et al, 2019).

33. The joint report focuses on institution-level, aggregate information across instruments, sectors and regions. In 2018, the joint report included climate finance received at the country level by year since 2015 for the first time. In 2020, the joint report expanded its geographic coverage to include climate finance commitments in all economies where the MDBs operate, including high-income countries, and included an annex comparing the new data with that of previous reports. In addition, since 2017, most of the MDBs have begun to publish project-level activity data on their own websites which are compiled in the joint report. Those MDBs include ADB, European Bank for Reconstruction and Development (in its sustainability report), IADB, IBRD and the International Development Association (the concessional finance arm of the World Bank). All of these MDBs also report activity-level data through the OECD DAC system, although some MDBs with private sector operations consider these climate finance commitments as confidential at the activity level.

34. The methodologies used by the MDBs to track climate finance align with the common principles for tracking financing for climate change mitigation and adaptation (AfDB et al, 2015b, 2015c) jointly agreed by the MDBs and IDFC. For more details on definitions of climate finance in use, see section 1.4 and annexes B and C.

International Development Finance Club green finance mapping report

35. IDFC reports green finance flows from 26 national, regional and bilateral DFIs based in both developed and developing countries. The green finance covered is broken down into climate finance for mitigation, adaptation and cross-cutting areas, and finance for a broader range of environmental projects. Data are collected through a survey, which includes guidance on reporting, that is sent out to member institutions.

36. The IDFC green finance mapping report contains institution-level finance commitments by theme (i.e. mitigation, adaptation, cross-cutting and environmental) and group-level flows by sector, instrument and regional distribution. Financial commitments are those signed or approved by the board of the reporting institution during the reporting year in the form of, inter alia, loans (concessional and non-concessional), grants, guarantees, equity and mezzanine finance used by financial institutions to finance investments (IDFC, 2019).

37. In line with the MDB-IDFC common principles for climate finance tracking, a consistent categorization of mitigation and adaptation activities was agreed by IDFC members. For more details, see annexes B and C. The data-collection process is conducted by an external consultant who carries out spot-checks in relation to any inconsistencies and provides guidance to data reporters when needed. Not all IDFC members participate in the survey owing to inadequate reporting systems, a lack of dedicated resources for data collection, non-availability of data and confidentiality issues. This can lead to incomplete or inconsistent data collection over the years as the number of data reporters varies and not all members have the capacity to report across all sectors and activities (e.g. adaptation finance) (IDFC, 2019).

Multilateral climate funds

38. Multilateral climate funds, such as the GCF, the GEF and the AF, publish project-level activity data on their respective websites (see section 1.3.4). CFU is an independent website maintained by the Heinrich Böll Foundation and ODI that offers annually standardized and aggregated project-level information from 23 climate funds, including information on pledges, approved commitments and disbursed funds (CFU, 2020). In addition, the GCF, GEF, AF and CFU report on activity-level data to the OECD DAC system.

Other sources of international public climate finance information

39. The International Aid Transparency Initiative standard is a framework for publishing data on development cooperation activities using standard formats, codes and classifications that are largely aligned with the OECD DAC statistical system. The standard accommodates reporting on a wide variety of activities, including climate finance (mitigation and adaptation) from more than 525 publishers and institutions, such as bilateral and multilateral organizations, DFIs, NGOs and private development assistance providers.[18]

40. TOSSD is a new international statistical framework for monitoring official resources into developing countries, private finance mobilized by official interventions, as well as contributions to international public goods in support of sustainable development (TOSSD, 2021).[19] The objective of the statistical framework, whose development began 2014, is to capture a broader array of actors, from traditional bilateral and multilateral aid reporters to emerging providers and private finance

18) See the 2018 BA for a detailed description of the IATI standard available at 2018 BA Technical Report Final Feb 2019.pdf (unfccc.int).

19) Available at http://www.oecd.org/dac/tossd/.

actors, as well as instruments, such as guarantees. Support is reported against actions for each of the SDGs, including SDG 13 on climate action. The scope of data collection includes cross-border flows to eligible recipient countries[20] as well as global and regional expenditures for international public goods, such as activities that promote international cooperation, knowledge generation and dissemination, and expenditures in provider countries that address global challenges. For example, official support for climate mitigation activities in provider countries may be included given the benefits involved in response to global challenges, while adaptation support may not be included given that benefits to adaptive capacity tend to be local in scope and specific to the country context. However, both mitigation and adaptation research and development activities may be included, subject to certain criteria, as they benefit global climate action.

41. In 2020, the international task force of experts developing the TOSSD methodology agreed to tag data on climate mitigation and adaptation support with operational definitions based on the definition of climate finance used in the 2014 BA.[21] A first TOSSD data collection was performed in 2020 (on 2019 data). It captured USD 76 billion of activities previously unreported, the majority of which include public domestic spending on mitigation actions.

1.2.2 Methods to track and estimate private climate finance

Methods for estimating private finance mobilized by public interventions

42. The OECD DAC has developed an international standard for measuring private finance mobilized by official development finance interventions, including for climate finance (OECD, 2020a). In order to address methodological issues related to accounting boundaries, causality and attribution to avoid double counting, as well as to address the need for accuracy and practicality, OECD DAC has focused on developing instrument-specific methodologies. To date, methodologies to measure the amounts mobilized have been developed for syndicated loans, developmental guarantees, shares in collective investment vehicles, direct investment in companies, credit lines, and, since the 2018 BA was published, simple co-financing and project finance schemes.

43. Since 2017, data collection on private finance mobilized has been fully implemented in the regular DAC statistical system, while data for the years 2013 to 2015 were gathered through surveys. Data are collected from both bilateral and multilateral development finance providers following the methodology for comparability purposes and to avoid double counting. Work is ongoing to develop further guidance and criteria for reporting the mobilization effect of some technical assistance and capacity-building activities while avoiding risks of double counting (OECD, 2020c).

44. For understanding finance linked to capacity-building activities, bilateral finance providers such as Germany's International Climate Initiative have begun to include indicators on catalysed private and public finance in addition to mobilized private and public finance for project implementers to report on as long as the causal link for such catalysation can be explained (BMU, 2020).

45. The MDBs and IDFC continued to report on private finance mobilized in 2017 and 2018. MDBs differ in approach to OECD DAC by differentiating between private finance directly mobilized by an MDB intervention or indirectly mobilized. MDBs also report on public climate co-finance from international and domestic sources and public finance directly mobilized by MDBs, thereby including some bilateral flows from other development finance providers in their figures. For a detailed discussion on these methodologies, please refer to the 2018 BA.

46. MDBs also continue to participate in reporting mobilized finance data through the OECD DAC system and methodology although data confidentiality constraints can hinder data disclosure at the activity level. In 2019, a joint MDB-OECD DAC working group on mobilization was launched to explore solutions for addressing confidentiality concerns when reporting on mobilization to the OECD DAC system (OECD 2020a). Annex D summarizes information on the approaches used by the OECD DAC, MDBs and IDFC for estimating, tracking and reporting on these private finance flows including information on definitions, financial instruments, coverage, attribution and measurement methods.

20) Recipient countries are defined as ODA-eligible recipients. Other countries can opt to be listed as recipients (TOSSD, 2021).

21) See http://www.oecd.org/dac/tossd/Item-7-Pending-issues-on-TOSSD-classifications.pdf.

Sector-specific methods for estimating private climate finance

47. Private finance is estimated to be the largest source of global climate finance flows, even though reporting on private finance sources and data is largely underdeveloped across multiple sectors. Main features of the methodologies used by some of these entities to collect and aggregate partial data or to estimate private climate finance flows of relevance to total global climate finance are described below (see section 2.2).

48. **For renewable energy finance**, BNEF hosts a commercial database that collects and aggregates project-level data on renewable energy investments when disclosed. It 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. The data on geographic coverage is extensive, particularly in relation to developing countries, which are often underreported in other commercial databases.

49. The BNEF database counts all projects above a certain size and estimates smaller distributed technologies. Where deal values are not disclosed, estimated values are assigned with debt-to-equity ratios based on comparable transactions and country-level technology assumptions of costs per megawatt installed. The sources of private finance are available only for projects with disclosed investment information.

50. BNEF renewable energy finance data are used as a basis for publicly available data resources, specifically:

- BNEF Climatescope reports, which provide data on the cross-border transactions of renewable energy projects in developing countries;
- The BNEF/FS-UNEP Centre report on global trends in renewable energy investment, which offers data on asset finance, venture capital, private equity and public markets, and research and development;
- The CPI report on the global landscape of climate finance.

51. **For estimating energy efficiency investments**, IEA gathers technology and application-specific sales data from across the buildings, transport and industry sectors and subsectors. Incremental investment estimates are calculated against the cost of similar technologies at minimum energy performance standards or sector averages.

52. **For estimating EV and charging infrastructure investments**, IEA gathers data on the sales, prices and technical specifications of all EV models in the markets of 15 countries, representing approximately 95 per cent of the global market (IEA, 2019b). Incentives in the form of direct grant rebates to retailers, manufacturers and consumers, tax exemptions or differentiated taxes between diesel and petrol vehicles are also recorded to calculate the split between public investment through subsidies and private investment through consumer spending. IEA data on public and private investments in EVs and charging infrastructure were used in the CPI report *Global Landscape of Climate Finance 2019* (CPI, 2019a).

53. **For other infrastructure investment,** commercial data providers such as IJ Global and Preqin provide project- level data on investments and transactions and investors. Investment data on water, waste, municipal and low-carbon transport infrastructure projects were also used in the CPI report (CPI, 2019a).

Instrument-specific methods for estimating private climate finance

54. **Green bonds data** represents a potential source of information for private climate finance. A variety of data providers publish information on the issuance of green bonds. Publicly available regular reporting on the status of the green bond market is published by CBI and the investment bank SEB. Commercial databases on green bonds are available from Bloomberg, Refinitiv and Environmental Finance. CBI publishes green bond data issued in the preceding three months on its website and offers additional data through subscriptions. However, green bonds are characterized by a use-of-proceeds model, where issuance amounts may refer to climate-related investments already made in previous years or investments yet to be made, hindering the application of the data to estimates of climate finance flows in a given year.

55. Green bond use-of-proceeds and impact reporting, where issuers regularly report on the allocation of the proceeds of the bonds, provide an opportunity to identify project-level data linked to green bonds for incorporation in private climate finance estimates (CPI, 2019a). For bonds issued up to end of the 2017, approximately two-thirds of issuers reported on use of proceeds (CBI, 2019a). However, few issuers provided project-level information to be included in climate finance estimates: they identified approximately USD 2.8 billion as relevant climate finance from municipalities, and corporate investment in water, waste and energy efficiency, compared to a potential USD 53 billion in green bond issuance from these issuers (CPI, 2019a).

1.2.3 Methods for tracking climate finance at country level

56. At country level, there are opportunities to use climate finance tracking and reporting to more directly inform policy decisions for scaling up domestic and international resource mobilization to meet national climate change objectives.

57. Existing climate finance mapping approaches and methodologies at the country level include:

- CPEIRs: Supported by UNDP and the World Bank, these reviews offer a systematic qualitative and quantitative analysis of a country's public expenditures, policies and institutional framework in relation to climate change. Many countries that have conducted CPEIRs have gone on to develop climate budget tagging systems in line with their national circumstances;
- Climate budget tagging: Supported by UNDP and the World Bank, this approach classifies climate-relevant budget expenditures in a government's budget system, allowing countries to mainstream climate change in public financial management and reporting;
- Domestic climate finance landscapes: This approach tracks the life cycle of climate finance flows, including the source of finance, intermediaries, instruments, disbursement channels and uses. Most country-level reports focus on specific sectors such as energy, buildings or land use, and on incorporating forward-looking perspectives to assess flows against investment needs set by policy.

58. Methodologies developed for country-level reporting on climate finance are implemented by government agencies or non-State actors in the country and consist of one-off studies or regular reporting based on established tracking systems, as shown in table 1.1.

59. With regard to government-led tracking initiatives, most focus on public climate expenditure in national budgets. Many analyses include transfers to subnational entities or agencies while other analyses also include expenditures at the subnational level. The aims of climate finance tracking of public expenditures vary from monitoring implementation of national climate

Table 1.1

Status of country-level climate finance tracking

	Government-led initiatives	Non-government-led initiatives
Annual reporting *(year indicates the start of data availability)*	**Climate budget tagging:** Bangladesh (2014), Honduras (2017), Indonesia (2016), Mexico (2014), Nepal (2013), Nicaragua (2018), Pakistan (2017), Philippines (2015) **CPEIR:** Cambodia (2009) **Other:** Colombia (2011), EU (2014), France (2019), Ireland (2019)	**Climate finance landscapes:** France (I4CE, 2011)
Studies *(year indicates publication year)*	**CPEIR:** Bangladesh (2012), Chile (2015), China (2015), Colombia (2018), Ecuador (2017), El Salvador (2018), Fiji (2015), Ghana (2015), Guatemala (2019), Honduras (2016), Indonesia (2012), Kenya (2016), Marshall Islands (2014), Mozambique (2012), Nauru (2013), Nepal (2011), Nicaragua (2015), Pakistan (2015, 2017), Philippines (2013), Samoa (2012), Tanzania (2013), Thailand (2012), Tonga (2016), Vanuatu (2014), Viet Nam (2015)	**CPEIR:** Ethiopia (ODI, 2014), Morocco (World Bank, 2012), Uganda (ODI, 2013) **Climate finance landscapes:** Belgium (Trinomics, 2016), China* (CPI, 2021), Czechia (CVUT, 2020), Germany (CPI, 2012 and IKEM, 2020), India* (CPI, 2020), Indonesia (CPI, 2014), Latvia (RTU, 2020), Poland (WiseEuropa, 2020), South Africa (CPI, GreenCape and the UCT GSB Bertha Centre for Social Innovation and Entrepreneurship, 2021) **Other:** Argentina, Colombia, Jamaica, Mexico, Peru in 2017 budgets (IDB 2020) **Land use finance mapping:** Côte d'Ivoire (CPI/EFI, 2017), Papua New Guinea (EFI, 2018), Viet Nam (EFI, 2018)
Methodology developed	**Climate budget tagging:** Ethiopia (2017), Ghana (2018), Kenya (2018), Moldova (2016), Uganda (2020)	

Source: Compiled from World Bank 2021a; CPI, 2019b; and UNDP, 2019.

Notes: *indicates green finance landscapes including climate finance.

policy plans to identifying financing gaps in order to attract international climate finance. Kenya's climate budget tagging methodology (Kenya National Treasury and Planning, 2019) refers to reporting requirements under the enhanced transparency framework of the Paris Agreement. In recent years, efforts to adopt green budgeting in France and Ireland have sought to identify eligible green expenditures to link to the issuance of sovereign green bonds.

60. Methods to define and account for public climate expenditures differ depending on national circumstances. Informed by the Rio markers approach, CPEIRs use similar definitions for adaptation and mitigation finance (see annex B), and tag relevant budget lines, programmes or components as having low, medium or high relevance to climate mitigation or adaptation outcomes. The quantification of climate-relevant expenditures report programme budgets against these high, medium or low markers (Ethiopia, Nepal) or apply discount weighting, such as 100 per cent for highly relevant budget lines, 50 per cent for those with medium relevance and 20 per cent for those with low relevance (EU, Ghana, Honduras, Pakistan). The EU uses the Rio markers to report on its objective of spending at least 20 per cent of the 2014–2020 EU budget on climate action. Each policy area in the budget is designated as significant, moderate or insignificant with the amount weighted 100 per cent, 40 per cent and 0 per cent, accordingly. This approach may result in an overestimate of climate finance expenditure if climate relevance criteria and weighting are applied inconsistently (UNDP, 2019; ECA, 2020).

61. Under the climate budget tagging methodology, indicative lists of adaptation and mitigation activities, often informed by national climate change plans, are used to tag budget codes in the financial management system or in manual reviews of the budget. If tagging is done at the granular programme component level, no weighting needs to be applied to the expenditure (Ecuador, Indonesia, Nicaragua, Philippines). Some countries quantify climate-specific expenditures further by calculating the incremental costs associated with the expenditure: Bangladesh's approach subtracts a business-as-usual weighting from the climate relevance weighting to provide further qualification of the climate-relevant amounts. Cambodia conducts a cost–benefit analysis for each type of climate-relevant activity, comparing it with a business-as-usual project, with the difference in net benefit acting as the weighting for the activity. This leads to a 27 per cent weighting applied to renewable energy programmes, for example.

1.2.4 Methods used to aggregate climate finance flows

62. Methods used to aggregate climate finance reporting from various data sources vary in terms of geographic focus. The focus may be on estimates of finance flows at the global level, estimates of flows from one group of countries to another (i.e. from developed countries to developing countries), or flows directed to SIDS and LDCs or to specific developing country regions. In all cases, methods are designed to avoid double counting, with priority given to project-level or activity-level data from various sources.

63. OECD analyses and reports on climate finance provided and mobilized by developed countries, most recently covering the 2013–2018 period (2020a). The analysis captures and aggregates activity-level data for four components: bilateral public climate finance, multilateral public climate finance (attributable to developed countries), climate-related export credits, and private finance mobilized by bilateral and multilateral public climate finance (attributed). Data are sourced from a variety of sources: bilateral climate finance reported in the BRs of Parties to the UNFCCC, climate-related export credits in the OECD Export Credit Group database, and statistical data from the OECD DAC reporting system on multilateral climate finance outflows and private climate finance mobilized. Improvements made in the 2019 and 2020 editions of the report include greater granularity in the estimates of private finance mobilized, as all entities provided activity-level data, and the application of the OECD DAC instrument-specific methods to the allocation of private finance mobilized to different actors. The report provides explanations of the funding sources covered, the classification of developed and developing countries, the definitions of underlying concepts and the bases for measuring climate finance. There is also a description of the steps taken to avoid double counting and to only account for the share of multilateral finance and private finance mobilized attributable to developed countries.

64. The CPI global estimates of climate finance flows aggregate transaction data from multiple sources to ascertain the sources and intermediaries of the origin of finance, instruments used, disbursement channels and sector or thematic uses. Public finance flows are aggregated from the OECD DAC database, CFU and survey responses from DFIs. Private finance estimates are aggregated from BNEF renewable energy databases, IEA data on EVs and solar water heater sales. As data sources are aggregated, transactions involving public entities

Box 1.1

Measuring multilateral climate finance outflows attributed to developed countries

One key aspect in aggregating climate finance provided and mobilized by developed countries is in attributing climate finance from multilateral institutions. A variety of approaches may place different emphasis on institution-specific voting or ownership shares, as well as shares of capital contributions, whether paid-in capital to institutions accounts or callable capital contributions, which may be called upon in exceptional circumstances.

As some multilateral institutions, such as MDBs, raise finance on capital markets based on their paid-in and callable capital base, the credit rating quality of countries providing callable capital contributions plays a role in mobilizing MDB resources for climate finance. In its report, the OECD employs a methodology that takes account of the institution-specific share of developed countries' paid-in recent and historical contributions for multilateral climate funds and the concessional windows of MDBs. For climate finance from non-concessional windows, the methodology sums the share of total paid-in capital and the share of callable capital from developed countries with a credit rating of "A" or above during the analytical period. However, to reflect the higher value of paid-in capital in contributing to climate finance flows to developing countries, its portion of the calculation is weighted at 90 per cent with 10 per cent weighting applied to the callable capital portion. The application of the methodology results in institution-specific attributions ranging from 5.1 per cent from the CAF to close to 100 per cent for the European Investment Bank in 2018.

In aggregate to total outflows from all multilateral institutions, it resulted in 85 per cent attribution for multilateral institutions in the 2013–2014 period. In 2019, the OECD conducted sensitivity analyses on eleven different approaches to calculating the attribution from multilateral institutions, finding estimates could range 6 per cent less or 5 per cent more from the methodology calculation based on callable capital rates of 0 per cent to 100 per cent. For concessional windows, different approaches for considering current and/or historical contributions yield almost identical results. For non-concessional specific windows, different approaches ranged from 17 per cent less to 11 per cent more than the methodology calculation (OECD 2019a).

that populate multiple data sources are subtracted to avoid double counting. In 2019, improvements to the methodology included expanding coverage through additional data sources (IEA, IJGlobal, CBI, Convergence and additional DFI survey respondents) to integrate investment in EV charging infrastructure; expanding the scope of blended finance investments; and including non-energy infrastructure investments in water, waste and mass transit systems.

65. Oxfam, in its *Climate Finance Shadow Report 2020*, aggregated "climate-specific net assistance" by calculating grant-equivalent data for grants and concessional loans from the OECD DAC database to compare with data reported in the BRs of Parties to the Convention. Non-concessional loans, guarantees, export credits and other instruments, as well as finance for coal-related projects, were excluded. Project-level data marked as "significant" in the OECD DAC database was discounted to 30 per cent of project values for the low-end estimate and to 50 per cent for the high end. As grant equivalency data on climate-related ODA loan disbursements were only available for 2018, each country's average grant equivalency for 2018 was applied to 2017 data. For countries without grant-equivalent data and for MDB finance, the average for all DAC countries (49.8 per cent) was applied.

1.3 Reporting on climate finance under the Convention

1.3.1 Overview of the climate finance reporting system under the Convention

66. This section focuses on the methods for reporting on public and private climate finance flows under the Convention. It briefly describes the current arrangements for reporting under the Convention and the ongoing work to develop the reporting tables for the enhanced transparency framework under the Paris Agreement. It then presents issues relating to the BR4 CTF tables of Annex II Parties, as well as, when reported, issues related to climate-related private finance mobilized. This section also provides an overview of reporting on climate finance received by non-Annex I Parties in their BURs before presenting information on reporting by the operating entities of the Financial Mechanism of the Convention and its Kyoto Protocol.

67. Under the Convention, 24 Annex II Parties are required to provide information in their NCs, as well as their BRs and CTF tables 7, 7(a) and 7(b), on the financial resources provided to non-Annex I Parties.[22] The other

22) Features of the current system of the measuring, reporting and verification of support are described in a technical paper prepared by the UNFCCC secretariat, available at http://unfccc.int/sites/default/files/resource/docs/2017/tp/01.pdf.

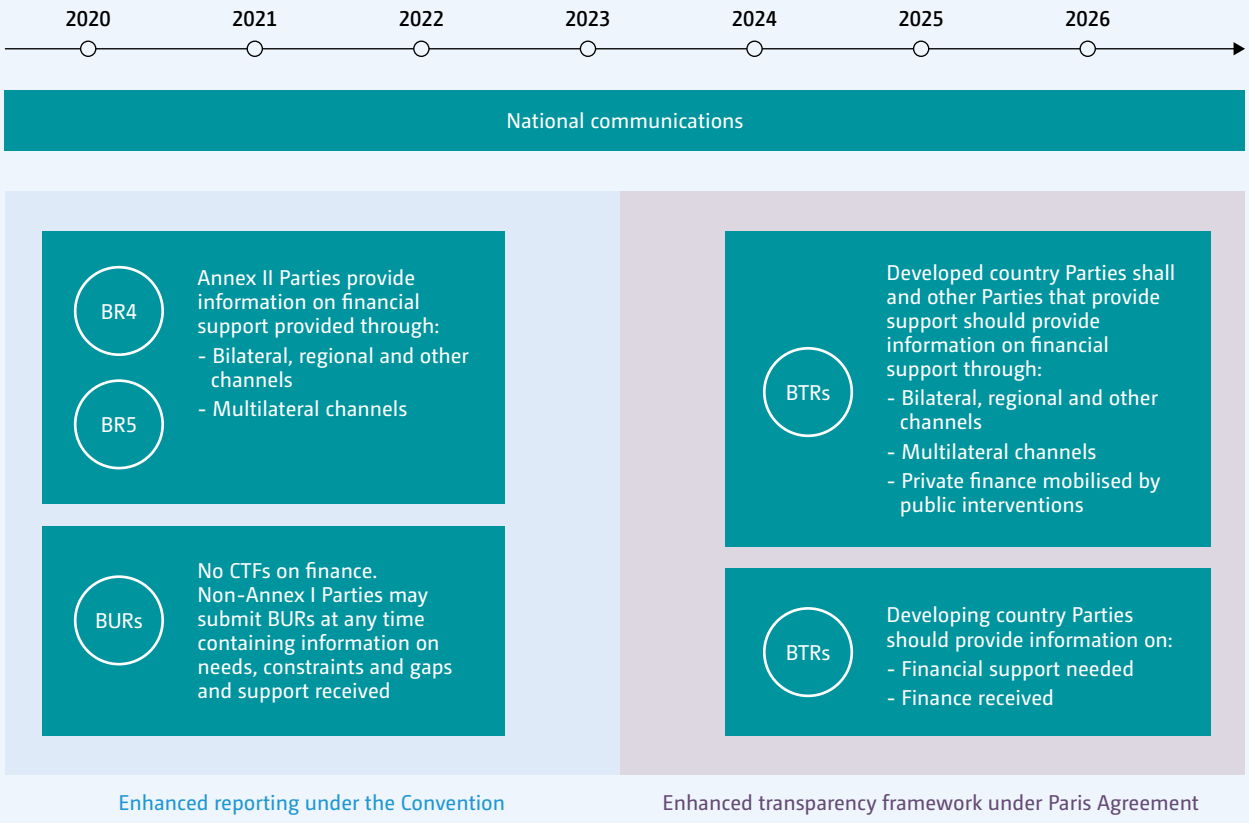
Annex I Parties, 20 in total, are required to submit NCs as well as BRs, but are not required to provide information in CTF tables 7, 7(a) and 7(b) on the financial resources provided to non-Annex I Parties. However, many do voluntarily provide such information, as seen in annex G. An IAR process is conducted with regard to the BRs of Annex I Parties. As a first step, expert review teams are established to assess the completeness of BRs in accordance with the reporting requirements, and a technical review report is prepared for each BR, taking into account the comments of the Annex I Party.[23]

68. The Paris Agreement includes provisions that call for transparent and consistent information on financial support (in the context of Article 9 on finance) as part of the enhanced transparency framework (established in Article 13 on transparency), which will build on and enhance 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 in order to inform the global stocktake. The elements relevant to the provision of financial information – the technical expert review, the facilitative multilateral consideration of progress and accounting of financial resources – are set out in Articles 9 and 13 of the Paris Agreement.[24]

69. COP 24 adopted the modalities, procedures and guidelines for developed country Parties to report on the financial support they provide and mobilize and for developing country Parties to report on their finance needs and finance received. Other Parties who provide support should also provide such information and are encouraged to use the same modalities, procedures and guidelines. The

Figure 1.2

Climate finance reporting with CTFs under the Convention and the enhanced transparency framework of the Paris Agreement



23) See the UNFCCC guidelines for technical review of information reported under the Convention related to GHG inventories, BRs and NCs of Annex I Parties, in accordance with the reporting requirements contained in decisions 2/CP.17 and 19/CP.18.

24) Information on elements relevant to provisions on transparency of support under the Paris Agreement is available at https://unfccc.int/topics/climate-finance/workstreams/transparency-of-support-ex-post.

CTFs, as applicable, are under development by the SBSTA. Parties are due to submit their biennial transparency reports under the Paris Agreement in 2024, including CTFs, as applicable, as well as the definitions of underlying concepts and methodologies used in the reports. Analysis of the quantitative and qualitative information provided through BRs and BURs helps identify solutions and ways to ensure that reporting under the enhanced transparency framework can fulfil the principles of transparency, accuracy, consistency, comparability and completeness of information.

1.3.2 Reporting on climate finance provided and mobilized by Annex II Parties

70. As at December 2020, 23 of the 24 Annex II Parties had submitted BRs and CTF tables. Of the 20 other Annex I Parties that may voluntarily submit information, 13 had provided data on financial support in their CTFs.

71. Analysis of the technical review reports on the BR4s[25] shows that the information on the provision of financial, technological and capacity-building support to developing countries has significantly improved in relation to completeness, with half the number of recommendations issued by reviewers compared to previous cycles. In relation to transparency, more recommendations were issued than in previous cycles. Of the reporting parameters and guidelines that apply to the financial support section in the BR4s, the largest number of reporting issues were identified in relation to allocation channels, type of support and needs for support, as well as explaining the national approach to tracking support.

72. Parties' reporting of quantitative data in the CTFs is accompanied by qualitative information on the underlying assumptions and methodologies used in the reporting process, either in a documentation box within the CTF or in the text of the BR itself. Six Parties did not provide any information in the documentation box and instead described their methodology in the BR. Issues related to specific parameters that affect the aggregation and analysis of data are outlined below.

- Use of calendar and fiscal years: Of the 23 Annex II Parties that submitted BRs, 1 reported on fiscal years, 4 specified that their reporting was based on calendar years while all other Parties did not specify this information. None of the other Annex I Parties that submitted CTFs specified this information;
- Exchange rate information: Of the 23 Annex II Parties that submitted BRs, 15 used OECD reference exchange rates for reporting in United States dollars, 7 used a national source for the exchange rate, and 1 Party used the rate issued by the United States Internal Revenue Service. Of the other Annex I Parties that submitted information, eight used national sources, one used the European Central Bank reference rate and four did not report data in United States dollars;
- Core general and climate-specific support to multilateral funds and institutions: In addition to reporting climate-specific financial support through multilateral channels, Parties may report support to multilateral institutions that cannot be specified as climate-specific under core general support. Of the 23 Annex II Parties that reported, 15 defined core general support as general contributions to multilateral institutions; 4 Parties reported the imputed climate-related share of their general contribution to the multilateral institution as a core general contribution, while 10 reported the imputed contribution under the climate-specific support. Another four Parties did not provide any data under core general contributions or did not specify this information;
- Climate-specific support through bilateral, regional and other channels: Eighteen Annex II Parties provided information on climate-specific support based on their use of the OECD DAC Rio markers, three Parties applied case-by-case methodologies in identifying the climate-specific components of each project, and two Parties applied either the Rio markers or case-by-case methodologies depending on the type of funding source;
- Information on recipient country, region, project, programme and activity through bilateral, regional and other channels: The provision of data on recipients of climate finance can include geographic information and information on the activity. A Party may report data on amounts, instruments and status at the project level but report only the country or region in the recipient parameter. A total of 20 Annex II Parties provided data at the project level; of these, 14 included the country, region and project or programme name, 2 provided only the country or region information with project names under the "additional information" parameter and 4 provided only descriptive information on the country and region where the project is located. Two Parties

25) https://unfccc.int/documents/268359.

provided data at the aggregate country or region level by type of support (mitigation, adaptation, etc.) rather than at the project level, and one Party provided aggregate data at the country or region level only with project names in the "additional information" parameter. The heterogeneity in reporting information in this field hinders the ability to compile data on recipient country or region. Future developments of the reporting system to report geographic and project information separately may facilitate better compilation of data on recipient country and region;

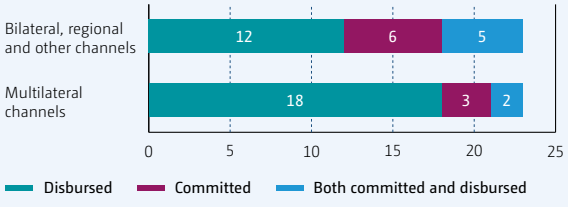
- Status: Most of the data on climate finance reported was in the form of disbursements of financial support. A total of 18 Annex II Parties reported funds as disbursements in their multilateral channel reporting, with 3 Parties reporting funds as commitments and 2 Parties using both committed and disbursed for different institutions and funds. Twelve Parties reported support as disbursements through bilateral, regional and other channels, with six reporting support as being commitments only and five reporting support as either disbursements or commitments depending on the project;
- Funding source: A total of 19 Parties provided information in relation to the funding source in the documentation box or in the BR, of which 11 referred explicitly to OECD DAC definitions of ODA and OOF;
- Financial instruments: A total of 19 Parties provided information on definitions of financial instruments in the documentation box or in their BR, with 11 referring explicitly to OECD DAC definitions;
- Type of support: Parties report financial support as targeting mitigation, adaptation, cross-cutting or other under the "type of support" parameter. In contrast to previous reporting cycles, no Annex II Parties provided information as "other", providing a clearer breakdown of types of support. As reported in the 2018 BA, only one reporting line per organization is provided to report support provided through multilateral channels, which impedes differentiating the types of support provided to an organization, resulting in an overrepresentation of the "cross-cutting" category;
- Sector: A total of 18 Parties provided information on sector classifications, with 13 basing their sector inputs on the OECD DAC classifications and 5 reporting in line with the classification listed in the reporting guidelines. Another five Parties did not specify a methodology but reported in accordance with classification listed in the guidelines. The current reporting system does not allow for climate finance by sector to be aggregated owing to data entry issues within the reporting system. If a Party reports multiple sectors per entry or reports a sector label that is not recognized, the reporting system lists the information as "other". Eight Parties have reported multiple sectors per entry in their BR4. Two Parties reporting in line with the sector classification listed in the guidelines described their application of sector coding from OECD DAC codes. Future developments of the reporting system to allow multiple sectors per entry and/or replication of sector coding efforts by Parties may facilitate a more comprehensive compilation of sector-level data.

73. Parties are also required to report on what new and additional financial resources they have provided and specify how they define resources as new and additional. A total of 23 Parties provided this information, 13 through the documentation box and 10 in the text of the BR. Of the 23 Parties reporting the information, 13 indicated that new and additional resources consisted of newly disbursed or committed finance in the reporting year, 7 used either 2009 as a baseline year (3 Parties) or increases over previous commitments on development finance (4 Parties), while 2 Parties described their climate finance amounts as flows that exceeded the target of 0.7 per cent of GNI for overall development finance. One Party identified a separate environmental fund as the source of climate finance from traditional ODA channels.

74. In accordance with the reporting guidelines, Parties should report, to the extent possible, on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties, as well as policies and measures that promote scaling up private investment in developing country Parties. Three Parties reported private finance mobilized through bilateral, regional and other channels in the CTF, and a further nine Parties included estimates in the text of the BR.

Figure 1.3

Reporting of data on commitment and disbursement of funds in the fourth BRs of Annex II Parties, by number of Parties



75. Several Parties noted that there is presently no internationally agreed standard for tracking private climate finance, with the exception of OECD efforts to develop a standard for measuring private flows mobilized by development finance. As a consequence, a range of approaches to tracking private climate finance was reported: some adopted conservative approaches to assessment; some provided values only where agreed OECD reporting methods were available (i.e. for guarantees, syndicated loans, equity shares, direct investment, credit lines and co-financing); some noted that multilateral contributions could not be calculated owing to the complexity of players and the efforts involved; and some reported no estimates, noting either a lack of reporting systems to capture this information or concerns about confidentiality.

76. The Parties that provided information on policies and measures to promote the scaling-up of private investment in developing countries reported various approaches: deployment of on-site expertise; mobilization of capital through various instruments; micro- and co-financing; and risk-sharing and insurance mechanisms to prevent and reduce losses. Several Parties also described practices to maximize private sector engagement, including using multi-sector dialogues to facilitate broad participation and strengthen and replicate successes, and drawing on appropriately timed public support (i.e. to leverage private interest later in the project cycle). Several Parties also outlined how they had engaged the private sector in partner countries with the aim of building an enabling environment for future investment. Few Parties provided quantitative estimates of private flows or information on leveraging ratios, though a number indicated their intention to continue participating in the OECD Research Collaborative. As a result, Parties may be better positioned to provide more detailed information on private climate finance in future BRs.

1.3.3 Reporting of climate finance received by non-Annex I Parties

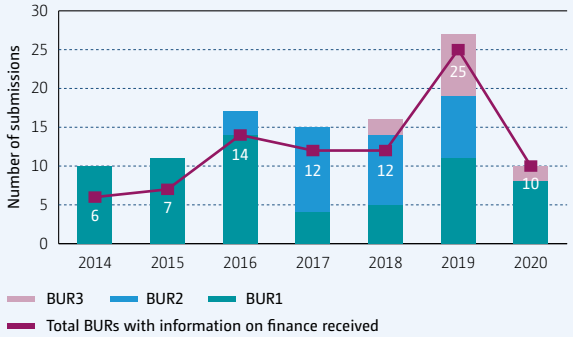
77. The "UNFCCC biennial update reporting guidelines for Parties not included in Annex I of the Convention" state that non-Annex I Parties should provide updated information on financial resources, technology transfer, capacity-building and technical support received from the GEF, Annex II Parties and other Parties that provide support, the GCF and multilateral institutions for activities relating to climate change, including for the preparation of BURs.[26] However, there is no associated common reporting format, and the guidelines do not require information on the underlying assumptions, definitions and methodologies used to generate the information. Limited institutional capacity and resources to track climate finance received, as well as a lack of data, can pose challenges for non-Annex I Parties to report this information. Ongoing work related to the implementation of the enhanced transparency framework will develop CTFs for developing countries to report on financial support received under Article 9 of the Paris Agreement.

78. As at December 2020, 63 non-Annex I Parties had submitted BURs. Of these, 31 had submitted a second BUR and 12 had submitted a third, resulting in a total of 106 BURs submitted. Since the 2018 BA was published, 46 BURs have been submitted; 19 of these are first-time submissions from non-Annex I Parties.[27] Not all BURs include information on finance received. 55 non-Annex I Parties have reported on finance received in 86 BUR submissions. Since 2014, this has shown an increase in reporting on finance received in BURs from approximately 60 per cent of submissions annually to over 90 per cent in 2019.[28]

79. Information included in BURs on financial support received varies in the degree of detail included (see annex F). Many Parties indicated that they were only able to report finance received by national governments and that

Figure 1.4

Number of biennial update report submissions with information on finance received, by year and reporting cycle



26) See annex III to decision 2/CP.17.

27) Ten BURs were submitted in late 2018 after the 2018 BA was published.

28) Some Parties, such as the Republic of Korea, provided information on financial support provided to non-Annex I Parties in their BUR.

the financial information was partial and represented best efforts to present accurate information while avoiding double counting. The reporting periods used vary across BURs, ranging from annual or biennial time frames to multi-year periods. In some cases, BURs included financial information associated with activity or project duration and/or years of commitment or disbursement.

80. Of the 55 Parties that have submitted BURs with information on finance received, 47 provided quantitative information in tabular format, although only four included data on support for the preparation of the BUR. The remaining eight Parties provided information in qualitative or textual format only. Of the 47 Parties that provided quantitative information in tabular format, 41 provided data at the project or activity level, while the other Parties provided aggregate information by provider institution or channel category. This is an increase from 23 Parties providing project-level information since the 2018 BA. Twelve Parties also reported co-financing amounts and 7 Parties reported on domestic financing.

81. Mapping reported information to elements for developing country reporting on finance received in the MPGs provides an overview on the current level of detail provided (see annex F). The most common elements reported include information on project or programme titles, amounts received and time periods, although time periods range from support received to date, to new projects initiated since the previous BUR. Almost half of the Parties reporting information in tabular format provided information on type of support (mitigation, adaptation or cross-cutting), sectors or financial instruments. Information on whether a project is linked to capacity-building, technology development and transfer, or technical assistance was reported by 16 Parties. Only several Parties provided information on the status of activities supported, as well as information on the impact and results of the finance received.

82. As Parties gain reporting experience, they provide more information in their second and third BURs. For example, in its third BUR, Brazil included two columns in tabular format on the linkages between activities and capacity-building and/or technology development and transfer, as well as a column providing hyperlinks to the projects, which were not provided in its second BUR. In addition, several Parties implemented best practices when reporting information on finance received with outcome-related indicators. For example, Antigua and Barbuda included an annex of all mitigation actions undertaken in the country, linking to the information on finance support data, including references to specific national policies, goals and performance indicators.

83. Processes to review the quality of information on climate finance in BURs are included in the ICA cycles.[29] While the primary objective of the ICA process is to enhance the transparency of mitigation actions, it is also expected to potentially contribute to improving the quality of BURs over time. ICA includes two steps: a technical analysis of BURs by a team of technical experts and a facilitative sharing of views through workshops. As at December 2020, 52 non-Annex I Parties had undergone at least one round of ICA.[30]

1.3.4 Reporting on climate finance under the Financial Mechanism

84. The operating entities of the Financial Mechanism include the GCF and the GEF, which were established under the Convention and report annually to the COP. The AF was established under the Kyoto Protocol, with the AFB designated as its operating entity, which reports annually to the CMP.[31] All operating entities may also serve the Paris Agreement and report to the CMA.[32]

85. There are presently no standard methodologies or formats for quantitative reporting by the operating entities. However, in its reports to the COP, the GCF provides aggregate information on the status of the funding pipeline, approved projects and disbursement data in tabular formats. Quantitative information on funding amounts at the activity level are also provided for the readiness and preparatory support programme, the project preparation facility, and projects and programmes under the adaptation and mitigation thematic windows. The readiness support programme activities include information on country/region, results achieved, delivery partners, amounts and years approved, disbursed finance and activity duration. The reporting on project preparation facility activities and approved projects and programmes includes information on project names, country/region, accredited entity, type of activity (mitigation, adaptation, cross-cutting), public or private focus, access modalities,

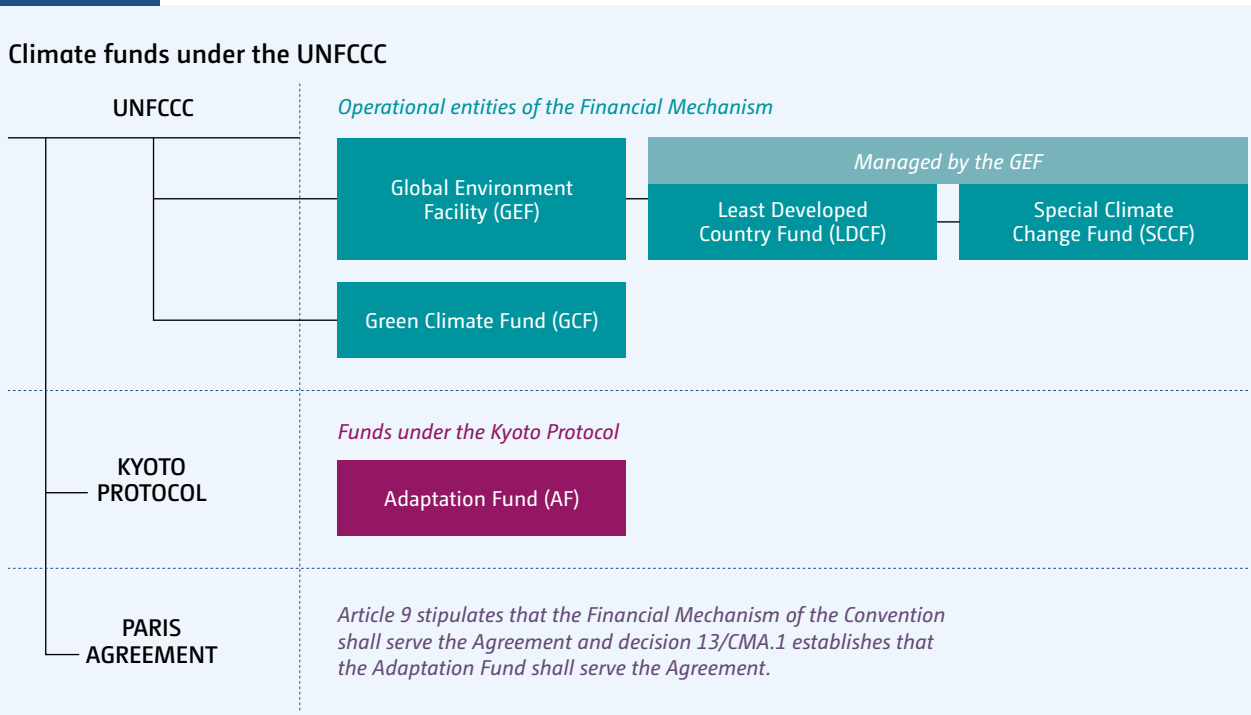
29) See decision 1/CP.16, paras. 63–64.

30) Summary reports on the technical analysis of BURs and the records of the facilitative sharing of views, including presentations and webcasts, are available on the UNFCCC website at https://cop23.unfccc.int/ICA-cycle1.

31) See decision 1/CMP.3.

32) See Article 9 of the Paris Agreement and decision 13/CMA.1

Figure 1.5



financial instrument and amounts approved. The project and programme activities also include total project values. The GCF does not currently have a methodology to track and report on the mobilization effect of the total GCF funding on the total project value.

86. The GEF reports to the COP cover activities under the GEF Trust Fund, the LDCF and the SCCF. The reports include co-financing ratios and, for mitigation financing, aggregated information by region and by sector for each period, and for adaptation financing, aggregated information by region. Activity-level data are provided for newly approved activities in the preceding financial year by country, agency, title, type and co-financing amounts. Information is also provided on support for enabling activities (NCs, BURs, TNAs and NAPAs) and capacity-building.

87. The AF reports to the CMP include information on activity-level funding decisions taken in the reporting period and aggregated by sector allocation. In addition, activity-level data on projects and programmes in the entire portfolio and pipeline are listed by country, title, implementing entity, approved and transferred amounts, approval date and project status. Information on project implementation and results per indicators are also included in the AFB Annual Performance Reports.

1.4 Operational definitions of climate finance in use

88. Since the 2014 BA, the SCF has used the following core definition for climate finance, based on a review of the climate finance definitions adopted by data collectors and aggregators, which pointed to a convergence that could be framed as: "*Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts*." When determining the amounts to be reported as climate finance, different data providers and aggregators apply their respective operational definitions of climate finance (see 1.1).

89. This section provides updated information on the ways, if any, the various operational definitions of climate finance have changed, the common elements that exist between those definitions in use by various actors and challenges identified. Annex B provides updated information on the operational definitions of climate finance adopted by international institutions and actors in 2020. This section also summarizes the views submitted by Parties on operational definitions of climate finance in the context of preparing the fourth BA.[33]

33) See decision 11/CP.25, para. 10 and decision 11/CMA.2, para. 10.

1.4.1 Thematic definitions of climate finance in use

90. Annex B provides details on the operational definitions of climate finance, mitigation finance and adaptation finance in use by international institutions. Since the 2014 BA, these have included the OECD DAC use of the Rio markers, the MDBs and IDFC methodologies respectively, in reporting on climate finance, the CPI definitions used in the Global Landscape of Climate Finance and the IPCC definitions of climate mitigation and adaptation activities. Across these institutions, climate finance is generally understood as finance for mitigation and adaptation activities, although in the case of the OECD DAC system, the purpose is to track the mainstreaming of climate objectives in development finance.

91. **Mitigation finance** definitions refer, in general, to financing for efforts to reduce, limit or sequester GHG emissions. OECD DAC extends the eligibility criteria for mitigation finance to include integration of climate concerns into recipient countries' development objectives, such as through capacity-building, policy and regulatory development or research, as well as activities that support developing countries' efforts to meet their obligations under the Convention. MDBs, IDFC and CPI use positive lists of activities considered compatible for operationalizing their respective definitions of mitigation finance, while OECD DAC guidance includes non-exhaustive example activities and rationales to aid the application of mitigation and adaptation markers to development finance data. The MDB list of activities eligible for classification has changed over the years; for example, charging stations for EVs and hydrogen or biofuel fuelling were added in 2017, and resource efficiency in aquaculture was added in 2018 (AfDB et al, 2017, 2018).

92. **Adaptation finance** definitions refer, in general, to financing for activities that reduce vulnerabilities and risks to climate change impacts. Eligibility criteria for operationalizing the definitions vary. The joint MDB approach follows a context- and location-specific, granular approach intended to capture the value of components or elements of projects that directly contribute to or promote adaptation. This includes three steps:

- Setting out the climate change vulnerability context of the project;
- Drafting an explicit statement of the project's intent to reduce climate change vulnerability;
- Articulating a clear and direct link between specific project activities and the project's objective to reduce vulnerability to climate change.

93. Similarly, IDFC applies the MDB-IDFC common principles for climate change adaptation finance tracking, although it also recognizes that if disaggregation of adaptation activities is not possible owing to data availability, qualitative or experience-based assessments may be used to identify the proportion of the adaptation finance in the project. OECD DAC requires the adaptation objective of the project to be explicit as well as the presence of specific measures targeting the definition of adaptation.

94. As noted in the 2016 BA, efforts to harmonize operational definitions in use include the common principles for climate change mitigation and adaptation finance tracking adopted by the MDBs and IDFC in 2015. Furthermore, the OECD DAC adjustments made to adaptation finance eligibility criteria in 2016 include guidance on following the best practice stepwise approach developed by the MDBs to support the marking of adaptation objectives as well as further examples and guidance to operationalize definitions within the Rio marker methodology (OECD, 2016).

95. The activity lists on climate mitigation developed by MDBs have served in part to inform green or climate-aligned taxonomies in recent years to support the development of the green bond market. Broader than definitions, taxonomies are classifications or schemes to support the operationalization of definitions (OECD, 2020). These initial efforts have facilitated the adoption by private sector financial institutions of guidelines, criteria and operational definitions regarding activities that may be in line with climate change goals. More recently, regulatory authorities have proposed legislative approaches to adopting taxonomies to combat greenwashing, reduce market fragmentation, promote standardization of financial products and remove barriers to scaling up climate-aligned investments (OECD, 2020e).

96. One of the widely used taxonomies is the CBI taxonomy, to support the development of a certification scheme for green bonds where the use of proceeds is linked to the assets and projects needed to deliver a low-carbon economy consistent with the Paris Agreement goals (CBI, 2020a). To date, 287 certified climate bonds, valued at USD 240 billion, have been issued globally,[34] and the CBI taxonomy has influenced the development of national-level definitions in several jurisdictions.

34) As at 9 October 2020. Available at https://www.climatebonds.net/certification/certified-bonds.

97. The CBI taxonomy consists of a positive list of climate mitigation activities as well as exclusions, such as coal or oil power without carbon capture and storage. A climate resilience approach is used to guide adaptation activities across the eligible activities in the taxonomy, which is based on the IPCC definitions of adaptation and resilience. Investments are defined as those that improve the ability of assets and systems to persist, adapt and/or transform in the face of climate-related stresses and shocks in a timely, efficient and fair manner that reduces risk, avoids maladaptation, unlocks development and creates benefits (CBI, 2019b). The CBI Climate Resilience Principles adopted in 2019 provide a framework for the screening of these investments.

98. In May 2018, the EU published legislative proposals to establish an EU sustainable finance taxonomy. The subsequent regulation, published in June 2020, defines sustainable economic activities as those providing a substantial contribution to one of six environmental objectives: mitigation, adaptation, protection of water, ecosystems, circular economy and tackling pollution. At the same time, a substantial contribution to one objective must do no significant harm to any of the other objectives. The EU taxonomy applies the industrial classification system of economic activities (Statistical Classification of Economic Activities in the European Community, known as NACE) to define technical criteria and performance thresholds for sustainable activities. In the area of mitigation and adaptation, high-level definitions similar to those mentioned above are adopted to guide the technical criteria at the activity level (EU, 2020a).

99. Although the recently developed taxonomies have been informed by existing positive activity lists used for climate finance reporting and approaches to identify activities with principal climate objectives, not all share common inclusions or common approaches to inclusions and/or exclusions. A study mapping five legislative approaches to sustainable finance definitions and taxonomies in China, France, the EU, Japan and the Netherlands (OECD, 2020e) found that, for climate change, there were common inclusions and approaches to classification of the renewable energy and building sectors, while the non-renewable energy and transport sectors were included in the various taxonomies using differing approaches. Many other countries have adopted or developed taxonomies to suit the national circumstances, including China, Mongolia, Bangladesh, Brazil, Kenya and Morocco, while it is understood that taxonomies are under development in Canada, Japan, South Africa and Malaysia (FC4S, 2021; NBI, 2020).

100. A comparison of existing operational definitions of climate finance that apply positive activity lists and taxonomies that explicitly mention climate change mitigation is provided in the table below:

1.4.2 Approaches to accounting for climate finance

101. As seen in sections 1.2 and 1.3, methodologies to track, estimate and report climate finance vary widely in terms of what is counted depending on the purpose and scope of the tracking exercise. The differences in approach can be summarized in nine key variables to be considered when operationalizing a given definition of climate finance for reporting purposes (Bodnar et al, 2015) (see also figure 1.6):

- *Geographic scope*: from where the finance has flowed to geographically, including international and/or domestic distinctions;
- *Recipients*: What actors receive the finance in the public and/or private sphere;
- *Objectives*: The motivation for the finance flow, whether it is primarily for climate mitigation or adaptation purposes, a co-benefit, or for no specific climate purpose but may contribute to a climate solution;
- *Causality*: The attribution of finance flows, or sub-flows thereof, to a specific reporter of climate finance, if necessary;
- *Instruments*: The range of instruments that should be included in the approach, whether a focus on concessionality is necessary and whether finance that is repaid (e.g. loans) should be counted;
- *Total or incremental costs*: Whether the total costs of a project or action are accounted for or the incremental costs of climate action compared to baseline investment case are counted;
- *Point of measurement*: Whether to account for financial commitments in a given year that may be disbursed over a number of subsequent years, and/or to count only disbursed finance;
- *Amount/cost of finance*: For some instruments, such as loans or guarantees, the finance flow may be accounted for at the face value of the instrument or the cost in providing it;
- *Gross/net flows*: Whether gross flows in a given year should be accounted or the net flows after accounting for loan repayments.

Table 1.2

Mapping of common and uncommon activities relevant to climate mitigation among existing positive activity lists and taxonomies

	Energy	Transport	Industry	Agriculture and forestry	Water and sanitation	Other
Common mitigation activities with a similar approach to criteria	**Renewable power:** Wind, solar, ocean, geothermal, bioenergy, hydro **Renewable heat/cooling:** Solar thermal applications, solar water heaters, geothermal, bioenergy Energy efficiency improvements in existing and new buildings	EV charging infrastructure	Manufacturing of low-carbon technologies	Afforestation, reforestation, conservation, land management, biofuel production	Wastewater treatment Anaerobic digestion, landfill gas capture, composting	
Common activities with different approaches to criteria/ thresholds	Energy storage Transmission and distribution Gas power Cogeneration of heat and power, district heating CCS Waste to energy	Energy-efficient in vehicles Urban public transport Railway, waterway, road transport	Energy-efficient industry GHG reductions in industry CCS	Agriculture, livestock production, aquaculture	Water supply and distribution Recycling	Research and development Supply chain measures Energy-efficient data centres
Uncommon activities (in only one list)	Nuclear power plants (CBI) Coal mine methane capture, reduction of fugitive emissions (MDB)				Water desalination (CBI)	Support for policy development, carbon finance (MDB) Broadband infrastructure (CBI)
Exclusion lists or examples	**EU:** Nuclear, waste to energy (due to DNSH assessment), unabated coal or gas power (due to criteria threshold) **MDBs:** Hydropower with high methane emissions from reservoirs, geothermal power with high CO_2 emissions, biofuels with net emissions, thermal coal retrofit **CBI:** Coal or oil power without carbon capture and storage, waste heat recovery or CHP from coal or waste collection going to landfill, landfill without gas capture oil power, products dedicated to clean or efficient fossil fuel energy, coal or oil upstream activities.	**CBI:** new roads, road bridges, upgrades, filling stations and parking facilities, oil tankers or other ships solely transporting coal or oil, biofuel vehicles		**CBI:** agriculture/ timber production on peatland		

Source: CBI 2020, AfDB et al 2018, TEG 2020.

1.4.3 Parties' views on operational definitions of climate finance

102. COP 25 and CMA 2 invited Parties to submit their views on the operational definitions of climate finance for consideration by the SCF in order to enhance its technical work in the context of preparing the fourth BA. Thirteen submissions were received from Parties or Party groupings.[35] A summary of their views is provided below.

35) As at October 2020, submissions had been received from AGN, AILAC, AOSIS, Canada, EIG, the EU, Indonesia, Japan, the LDC Group, Norway, the Philippines, Solomon Islands and Vanuatu. The submissions are available at https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx.

Figure 1.6

Range of potential approaches to accounting for climate finance flows depending on the purpose and scope of tracking

Factors	Range of approaches						
Geographic scope	International flows only			Domestic flows only			Global flows
Recipient	Public sector			Private sector			NGOs and civil society
Objective	Programmed or budgeted for climate objectives			Addresses climate as one of multiple objectives			No stated climate goals but possible co-benefits
Causality	Direct finance		Finance mobilized as co-finance		Finance mobilized through support for project preparation or technical assistance		Finance mobilized through support for enabling environments
Instruments	Grants	Concessional loans	Non-concessional loans	First loss/ patient equity	Equity	Guarantees	Insurance
Total or incremental cost	**Total cost** of a project or action				**Incremental cost** of a climate project or action compared to the baseline case		
Point of measurement	**Commitments:** Counting finance when the commitment is made, irrespective of when the finance will be disbursed (e.g. over a number of subsequent years of a project)				**Disbursements:** Counting finance that is actually disbursed and received by recipient entities		
Cost of expenditure	**Nominal value:** The face value of a loan				**Subsidy cost:** The cost of providing the loan measured by discounted cash flows		
Gross/net flows	**Gross flows:** The amount spent or committed in a given year				**Net flows:** The amount spent accounting for repayments over time (e.g. loans)		

Source: Bodnar et al, 2015

103. **Current operational definitions used in the BA:** Some Parties noted how the current operational definition of climate finance described in the BA reports since 2014 remains valid, aligns with their views or is broad enough to encompass varying definitions in use. The form of the operational definition was also noted, with some Parties mentioning that a single definition would not be useful. Some also indicated that the operational definition was useful, as it was broad enough to cater for the dynamic and evolving nature of the definitions owing to a variety of factors including:

- How the bottom-up approach outlined in the modalities, procedures and guidelines for the enhanced transparency framework will be implemented over time;
- How the need to track progress against the long-term goal in Article 2, paragraph 1(c), of the Paris Agreement will affect the scope of climate finance, with some Parties referring to the global stocktake of collective progress;
- How methodologies on and clarifications of definitions will evolve due owing to greater data availability over time.

104. Some Parties pointed to the use of a classification system or taxonomy over a single definition and referred to the development of a taxonomy or classifications external to the UNFCCC process or within their national sustainable finance frameworks.

105. Other Parties noted how the lack of a common definition impacts the ability to track and assess the fulfilment of obligations of Annex II Parties under the Convention and of developed country Parties under the Paris Agreement. A common definition is needed not only in the context of preparing the BA but also for the overall transparency and effectiveness of the UNFCCC process. This, in turn, can impact the linkage between levels of actions by developing countries and levels of support provided, and ultimately, the achievement of the objectives of the Convention and the Paris Agreement. In this context, two submissions proposed an operational definition, while other submissions proposed an operational approach to achieve greater convergence over time, based either on common principles or responses to a common set of questions to provide granular information.

106. **Coverage and scope:** The submissions affirmed the focus on mitigation and adaptation objectives in operational definitions of climate finance, while some Parties also included references to finance for loss and damage (e.g. relocation) as one of the thematic areas under climate finance.

107. **Sources of finance**: Many Parties noted that climate finance may derive from a variety of public or private sources. Some noted that a signification portion of climate finance should derive from public funds and some noted that mobilized climate finance from private sources should be accounted for in a grant-equivalent manner. Some submissions referred to climate finance in both domestic and international contexts, in line with the overall scope of the BA, while several submissions defined climate finance flows as international funding only.

108. **Instruments**: Most submissions considered a variety of financial instruments as relevant to the operational definitions of climate finance, either by listing them (e.g. grant, equity, concessional loans, guarantees, blended finance, etc.) or by referencing the bottom-up approach of the modalities, procedures and guidelines, which includes similar instruments. One submission suggested including only grant and concessional finance instruments in a proposed definition while another submission included a wide variety of instruments but noted that loans should identify the net or grant equivalent contribution once loans are repaid.

109. **New and additional**: Several Parties noted, with reference to Article 4, paragraph 3, of the Convention, that climate finance should be incremental in respect of ODA or exclude existing ODA, or should be in addition to the 0.7 per cent of GNI committed by donors to development finance flows. One submission called for an operational approach to deciding whether and how to account for development aid that is classified as climate finance by either identifying a suitable baseline to assess what is new and additional funding or taking a formulaic approach to discounting. One Party noted that although there was a need for this differentiation within the context of the UNFCCC negotiations, at the implementation level it was difficult to differentiate climate finance from development finance. Other Parties noted that climate finance needs to be understood in the broader context of implementing the SDGs and the Addis Ababa Action Agenda on development finance and that methodologies to understand how much development finance is dedicated to climate action were improving.

110. **Other factors**: Many Parties noted the importance of tracking and monitoring climate finance to avoid double counting, not only finance flows from provider to recipient countries but also from the national to the subnational levels, and that its effectiveness and impact are demonstrated. Others noted how impact of climate financing should be linked to enhancing implementation of climate policies, regulations and action plans to meet NDC targets. The importance of timely access to climate finance was also mentioned by several Parties.

1.5 Emerging methodologies for measuring climate finance outcomes

111. Work on methodologies for measuring mitigation and adaptation finance outcomes is progressing. Multilateral institutions include information on mitigation and adaptation outcomes at the project level in their official reports. The work done in other institutional contexts may also be of interest when developing approaches for tracking and reporting outcomes of climate finance, as some institutions have already developed methodologies or definitions around outcomes and impacts (e.g. IDFC, MDBs and OECD).

112. There is currently no agreed standard on measuring the impact of mitigation or adaptation finance. For mitigation, the quantification of GHG reductions is typically used as the main indicator to measure and report the impacts of the operating entities of the Financial Mechanism. For adaptation, the most common indicator for reporting on impact is the estimated number of beneficiaries. Without agreed international definitions of what it means to be more resilient and considering the various institutional settings (i.e. different programmes concentrating on different aspects of adaptation), it remains difficult to make comparisons of these reported indicators. Section 3.3.3 below includes an analysis of expected and reported results from the operating entities of the Financial Mechanism of the Convention and the Kyoto Protocol, as synthesized in annex G. This section outlines some examples of methodologies in use, in particular new developments in reporting international climate finance outcomes since the 2018 BA.

113. Bilateral contributors have variable approaches to reporting on climate finance impacts, including through using indicators. **The United Kingdom International Climate Finance** is a portfolio of investments which support developing countries in managing risk and building resilience to the impacts of climate change,

take up low-carbon development at scale and manage sustainability of natural resources. In 2016, the ICF published the first annual publication called UK Climate Finance Results, which sets out results from the investments against a set of key performance indicators (KPIs).[36] The six KPI include: (1) number of people supported to cope with the effect of climate change, (2) number of people with improved access to clean energy, (3) greenhouse gas emissions reduced or avoided (t CO_2 eq), (4) level of installed capacity of clean energy (MW), (5) volume of public finance mobilized for climate change purposes (GBP), and (6) volume of private finance mobilized for climate change purposes (GBP). The ICF KPI methodologies are used to guide relevant programme teams in their data collection for ICF results, and programmes are asked to report on results expected and achieved annually against the relevant KPIs.

114. **International Climate Initiative (IKI).** The IKI supports mechanisms for mobilizing additional funding, private investments, as well as sustainable business models. The planning and monitoring of IKI projects follows the impact logic of the Organisation for Economic Co-operation and Development. As from 2015, all new IKI projects are to use not only the project-specific indicators, but also the overarching standard indicators that summarize the central impacts of the funding project. Each project reports on all standard indicators to which it has made a significant contribution. The six standard indicators include: (1) reduction in greenhouse gas emissions and increase in carbon storage (t CO_2 eq) in the project/project area, (2) number of people the project directly assists with adaptation to climate change impacts or ecosystem conservation, (3) ecosystem area (in hectares) that is improved or protected by the project's activities, (4) number of new or improved policy frameworks for managing climate change and/or conserving biodiversity, (5) number of new or improved institutionalized structures or processes for managing climate change and/or conserving biodiversity, and (6) number of new or improved methodological tools for managing climate change and conserving biodiversity.

115. **Green Climate Fund**. The GCF established a results management framework with performance measurement matrices against which the impact, effectiveness and efficiency of its funding will be assessed. The GCF has eight mitigation and adaptation results areas. The results areas for mitigation include increased access to low-emission transport; increased low-emission energy access and power generation; increased energy efficiency in buildings, cities and industries; and sustainable land use and forest management (including REDD+ implementation). The main core metric is GHG emission reductions in tonnes of CO2 eq. Adaptation result areas include increased resilience of livelihoods of people, communities and regions; increased resilience of health and well-being, and food and water security; increased resilience of infrastructure and the built environment to climate change threats; and improved resilience of ecosystems. The number of beneficiaries is the core indicator for adaptation in the current version of the results management framework. The monitoring and accountability framework and accreditation master agreements with accredited entities also require annual performance reports and midterm and final evaluation reports on results and impacts, as well as implementation progress reports on project activities, objectives and outcomes on the basis of project milestones. An annual portfolio performance report is provided on the information received from these reports.

116. After an independent review of the results management framework in 2018, the GCF has continued to develop an integrated results management framework (IRMF), which will integrate and replace the initial results management framework and the performance measurement frameworks, with a view to establishing a simpler, more coherent and enhanced framework. The IRMF will facilitate the measuring of quantifiable impacts of GCF investments while also enabling measurement of its contribution to paradigm shift and implementation of the objectives of the Convention and the Paris Agreement. The IRMF consists of three results measurement levels along with the GCF eight results areas: (1) GCF impact level – paradigm shift potential; (2) GCF outcome level – (a) reduced emissions and increased resilience and (b) systemic change; and (3) project/programme level.

117. **Global Environment Facility**. The GEF, including the GEF Trust Fund, the LDCF and the SCCF, revises its results indicators for each replenishment. For the seventh GEF replenishment (2018–2021), the updated results architecture includes a total of 11 indicators, and the LDCF and the SCCF are reporting on 25 indicators. For climate change mitigation projects, emission reductions are reported as a core indicator, whereas for adaptation, a number of indicators, such as number of beneficiaries, area of land better managed to withstand the effects

36) The technical details of how to calculate results are explained in a series of methodology notes. Available at https://www.gov.uk/government/publications/uk-climate-finance-results.

of climate change and number of people trained, are measured and reported at the project level. Expected results are provided by the agencies at project approval, and at project midterm and completion, agencies report results achieved against the core indicators and sub-indicators defined during project approval. In addition, the annual performance report presents an evaluation of the outcomes, sustainability, quality of implementation, and monitoring and evaluation of completed GEF projects. The outcome of the projects is rated on a six-point scale, ranging from highly satisfactory to highly unsatisfactory.

118. **Adaptation Fund.** The AFB approved two impact-level results and five associated core indicators to track its impacts. The five indicators are: (1) number of beneficiaries; (2) early warning systems; (3) assets produced, developed, improved or strengthened; (4) increased income, or avoided decrease in income; and (5) natural assets protected or rehabilitated. Progress on the basis of these indicators is tracked on an annual basis. As part of the Fund's reporting requirements, implementing entities are required to submit a project performance report on an annual basis. The report requires information on a number of areas, including finance, procurement, risk, compliance with environmental and social policy and gender policy, implementation progress, lessons learned, progress towards outputs and outcomes, and progress against the identified milestones. The report also includes a results tracker that allows the Fund to track specific indicators across its portfolio. These indicators include outcome- and output-level indicators from the Fund's Strategic Results Framework, as well as its five core impact indicators, as described above.

119. **Multilateral development banks and the International Development Finance Club.** MDBs and IDFC do not currently include information on mitigation and adaptation outcomes in their joint report. However, in line with the Paris Agreement and its call for financial flows to be aligned with low-carbon and climate-resilient development pathways, MDBs and IDFC developed jointly the climate resilience metrics framework, which provides systems of measurement to define and report on the contribution of financing activities to climate resilience objectives. Taking into consideration the great heterogeneity and diversity of climate vulnerability contexts and of potentially appropriate financing responses, the climate resilience metrics framework avoids defining metrics, and rather guides the development of climate resilience metrics for individual projects on two levels: (1) quality of project design (diagnostics, inputs, activities); and (2) project results (outputs, outcomes, impacts).

120. The climate resilience metrics framework is underpinned by four core concepts to develop climate resilience metrics: (1) a context-specific approach; (2) compatibility with the variable and often long timescales; (3) an explicit understanding of the inherent uncertainties associated with future climate conditions; and (4) the ability to cope with the challenges associated with determining the boundaries of climate resilience projects. The framework is a flexible structure based on a logical model and results chain and can be applied differently by different financial institutions. MDBs and IDFC members develop their own specific climate resilience metrics using the common language set out in this framework.

121. In 2019, the World Bank launched the Action Plan on Climate Change Adaptation and Resilience to further support countries' efforts to adapt and manage climate risk and build resilience. The plan included the development of a new Resilience Rating System which was piloted in January 2021 in more than 20 projects across all regions and covers various sectors, such as human development, infrastructure and sustainable development. The RRS has two major functions: it provides guidance on developing climate-resilient projects and it assesses what projects are doing to increase climate resilience. The system evaluates two complementary dimensions of resilience, each one is rated from C to A+: (1) Resilience of the project rates the confidence that expected investment outcomes will be achieved, based on climate and disaster risk consideration in project design, incorporated adaptation measures, and demonstrated economic viability despite climate risk; (2) Resilience through the project rates a project's contribution to adaptive development pathways based on whether investments are targeted at increasing climate resilience in the broader community or sector. The resilience rating methodology, from C to A+ in each dimension, can serve as a guide for institutions, public and private sector participants, as well as project developers, that are looking to improve disaster and climate resilience (World Bank Group, 2021b).

122. **Climate Investment Funds.** CIF monitors and reports on the performance and contributions of its four programmes: The Clean Technology Fund, FIP, PPCR and SREP. CIF reports on both targets and achieved results annually. The results draw from two sources of information: (1) national-level results collected and reported by countries; and (2) annual, detailed project-level results data collected and reported by implementing MDBs. Reflecting a programmatic, participatory approach, a range of in-country stakeholder groups come together for a workshop to deliberate and agree on progress and results.

123. The results indicators vary depending on the objective and goal of the individual programme. The results indicators of the Clean Technology Fund are: amount of GHG emissions reduced, increase in finance for low-carbon development, supply of renewable energy, access to low-carbon public transport and energy efficiency. The FIP reports on emission reductions, enhancement of carbon stocks and livelihood co-benefits, such as access to finance, technical assistance and new jobs, as well as other relevant co-benefits, including biodiversity and environmental services, governance, tenure and capacity-building. PPCR tracks progress on the integration of climate change into national and sectoral planning, strengthened government capacity and coordination mechanisms, the development and uptake of climate-responsive tools and strategies, and the number of people supported to cope with the effects of climate change. The indicators of SREP include increase in both the supply of renewable energy produced and the number of people with access to clean energy, and other co-benefits, such as the level of public and private investments in targeted subsections, gender impact or GHG emissions avoided.

1.6 Emerging methods and metrics relevant to tracking consistency with the long-term goal under Article 2, paragraph 1(c), of the Paris Agreement

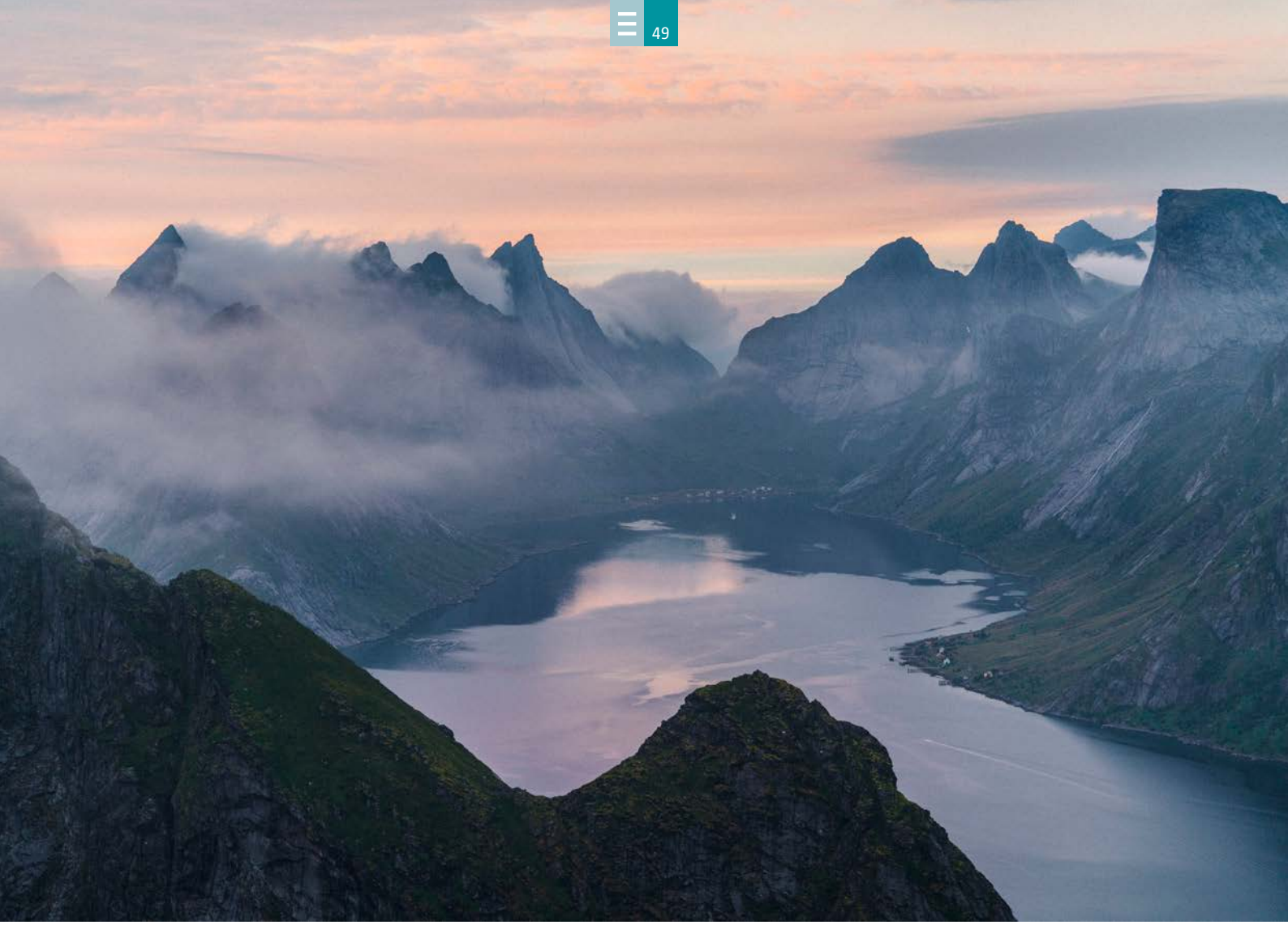
124. A growing number of actors in both public and private sectors are seeking to align business models, investment flows and risk management frameworks with the goals of the Paris Agreement. Chapter 4 provides a comprehensive mapping of relevant actions, actors and discussion points related to Article 2, paragraph 1(c), of the Paris Agreement. This section covers in detail specific and emerging methods and metrics applied by various actors aiming to align their activities with the goals of the Paris Agreement, particularly the goal under Article 2, paragraph 1(c), of making finance flows consistent with a pathway towards low-emission and climate-resilient development (hereafter referred to as Article 2.1c).

125. Two trends have driven the development of these methodologies and tools. First are voluntary efforts by investors, banks and corporations to make high-level commitments to act on climate change and/or set targets to underline these commitments. A second key driver is voluntary efforts to mainstream reporting on climate risks and opportunities in the financial system through, for example, the work of the TCFD under the Financial Stability Board and its emphasis on a forward-looking scenario analysis. More recently, regulators have reviewed the need for better disclosure requirements on climate-related risks with proposed amendments to regulatory frameworks in both the EU as a whole and individual member States, such as France and Sweden. Both of these drivers have led to the development of tools for actors to report on how they will act – either to meet commitments or to disclose climate risk management – and whether their actions are consistent with the goals of the Paris Agreement.

126. As with tracking climate finance, methodologies relevant to tracking consistency with the long-term goal under Article 2.1c, also need to overcome issues related to the definitions, scope or boundary of tracking, data availability and comparability. Methods differ as to the type of finance flows tracked (primary or secondary markets) and the ways to measure consistency (e.g. GHG emissions, intensity metrics or technology choices). While methodological choices differ, there are common 'decision points' encountered by a potential stakeholder in pursing efforts to measure or track consistency with Article 2.1c. Based on a non-exhaustive review of a range of methodologies currently under implementation, the common decision points are:

- **Identifying a given pathway** to low-emission and climate-resilient development against which the consistency of actions will be measured. Different pathways may be chosen relative to their consistency with low-emission development and mitigation goals, and to their consistency with climate-resilient development and adaptation or resilience goals.[37] Pathways may result in compatible activity lists or performance metrics against which to measure action. In addition, the timescale used to measure consistency is important. This could be, for example, within 5 or 10 years, or by a given year, such as 2050;
- **Reviewing the activities and actions to be tracked** (e.g. investments, economic activities such as production and sales or purchasing of goods and services, policymaking) that the stakeholder undertakes that is relevant to whether the pathway will be achieved;
- **Understanding what finance flows that go towards realizing the activities and actions should be tracked** by the stakeholder;

37) For in-depth discussion on the utility of climate scenarios and integrated assessment models to managing climate risks and opportunities, see BIS 2019. *The Green Swan: Central banking and financial stability in the age of climate change*. For an in-depth review of existing tools for scenario analysis see UNEP FI TCFD Pilot Report: Changing Course.



- **Identifying which key metrics to use** to assess whether finance flows and related decision-making processes result in activities and actions that are consistent with the given pathway identified during the review. Indicators or metrics are needed to assess whether or not current finance flows, or the economic activities that are financed by such flows, are consistent or on track with the reference pathways. These can include both quantitative and qualitative metrics or indicators.

1.6.1 Decision 1: Identifying a given pathway to low-emission and climate-resilient development and the appropriate timescale

127. Pathways in this context could range from national pathways for projected GHG emission reduction targets to economic modelling scenarios that meet the goals in Article 2 of the Paris Agreement. Classification lists of eligible and/or ineligible activities have also been used as references to assess consistency. Examples of how these various approaches have been applied are listed below.

128. **National-level pathways**: When testing a methodology for measuring consistency of investments with climate objectives, a pilot study by the OECD of the Latvian transport sector[38] used Latvia's projected GHG emission reductions from its fifth NC to the UNFCCC (2010) (see table below). Similarly, TPI aggregates national-level emission reduction pledges from NDCs when applying the Paris Pledges scenario to assess the carbon performance of listed companies.

129. **Classification lists**: The EU sustainable finance taxonomy for economic activities in respective sectors was used by the OECD when pilot testing methods using Norway's industrial sector and Latvia's transport sector. The criteria for different activities set within a taxonomy can relate to different pathways consistent with political targets on emission reductions and/or best performing practices and processes in the given sector.

130. **Scenarios**: Scenarios are applied in a range of ways. IPCC scenarios for trajectories of global temperature rises of 2 °C, well-below 2 °C and 1.5 °C are used to identify the annual rate at which emission reductions are needed. The

38) OECD has conducted three studies piloting methodologies to measure consistency of finance using various reference points including taxonomies, scenarios and national trajectories, as well as other quantified and time-bound objectives in the Latvian transport sector, the Norwegian industrial sector and United Kingdom building sector (Dobrinevski and Jachnik, 2020a,b, Jachnik and Dobrinevski, 2021).

same rate is then applied to corporations participating in an initiative. For example, this approach, known as the absolute contraction approach, was applied by 77 per cent of the 285 companies working with the Science-Based Targets initiative (SBTi, 2020). Similarly, the EU regulation on climate transition and Paris-aligned benchmarks uses the IPCC 1.5 °C pathway with limited or no overshoot as the reference pathway for the benchmarks, deriving a reduction of 7 per cent in emissions intensity per year (t CO_2 eq/year/€) as the trajectory. Therefore, an index portfolio must follow this decarbonization rate in order to claim to represent a portion of the economy in line with the Paris Agreement. (EU, 2020b)

131. Other uses of scenarios include deriving sector- or industry-specific emission performance pathways consistent with temperature goals. The IEA *Energy Technology Perspectives 2017* report provided the Beyond 2 °C Scenario for energy-related sectors, which is applied by 18 per cent of users participating in the SBTi, as well as TPI and PACTA (TPI, 2020, PACTA, 2020). SBTi and TPI apply SDA where the global carbon budget is divided by sector according to the scenario and then emission reductions are allocated to individual companies based on their sector's budget. Companies measure performance using emission reductions or GHG intensity of production (physical intensity targets). The PACTA tool uses scenarios to derive the physical asset level or technology level production or deployment rate, for example number of vehicles manufactured or GW installed. Other scenarios in use include those in the IEA World Energy Outlook reports and the Greenpeace Energy [R]evolution scenario.

132. Timescales apply specifically to scenarios where a given policy goal is achieved by an end point (e.g. 2050 or 2100). However, stakeholders apply the pathways used in the scenarios and identify reference points in interval periods (e.g. 5 or 10 years) to link to actions within their timeline.

133. Scenarios are also used to analyse climate-related risks to support climate-resilient development. The NGFS has worked with the academic community to develop reference scenarios suitable for assessing climate risks – both physical and transition risks – to the economy and financial system as part of their macroprudential stability mandates. Scenarios explore moderate (1.5–2 °C) and high (3+ °C) levels of warming by the end of the century and a variety of different transition pathways for reaching a given warming outcome (NGFS, 2020).

134. The use of reference pathways, whether through national plans, classification lists or scenarios, is an evolving field due to the need for climate-economy models to be tailored to the needs of specific stakeholders in the real and financial economy. Many models in use for the purposes of IPCC assessments may lack the necessary granularity and specificity for other stakeholders to act on with regard to Article 2.1c. The Paris Aligned Investment Initiative Net Zero Investment Framework, in requiring consistency with a reference pathway with a minimum 50 per cent chance of limiting temperature rise to 1.5 °C, notes the lack of robust pathways for net zero emissions and investment trajectories broken down by sector and region for this purpose, although further efforts are expected from international organizations and data providers to fill this gap (PAII, 2021). In relation to climate-related physical risks, a review of assessment tools targeted at bank lending portfolios found a lack of depth and data across value chains, in particular how geospatial data is combined with asset-level characteristics to understand how climate hazards will affect risk (UNEP FI, 2020a).

1.6.2 Decision 2: Reviewing relevant activities and actions to be tracked

135. Linked to achieving consistency with the pathways is connecting the measures within them to measures that are undertaken by the given stakeholder seeking to be consistent with the goal in Article 2.1c. Examples of such measures include i) corporations' sales and purchasing business models; ii) banks' lending decisions; iii) investors' investment decisions; and iv) governments' expenditure decisions and policy and regulatory designs. Households also make consumer decisions that may relate to measures within identified pathways.

136. At the entity level, decisions are necessary to limit the scope of the analysis to specific actions that will result directly in emission reductions or climate-resilient outcomes, such as expenditures or investments related to cleaner technologies, or broadening the scope of action to include all activities, such as service provision and staffing, that indirectly support such goals.

137. A traditional approach to initiating climate action is applying the framework of a GHG accounting protocol across scopes 1, 2 and 3 which may cover all relevant actions of a corporation or personal carbon footprint.[39]

39 The Greenhouse Gas Protocol categorizes direct and indirect emissions into three broad scopes: Scope 1: Direct GHG emissions occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment. Scope 2: Indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam. Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. transmission and distribution losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

SBTi participants apply scope 1 and 2 and scope 3 if it is 40 per cent of the overall carbon footprint, although targets in this case may take the form of supply chain engagement, where a company commits to drive the adoption of science-based targets among its suppliers.[40] Of 262 companies adopting targets covering scope 3, 63 per cent apply absolute targets, 22 per cent intensity targets and 13 per cent supplier engagement targets (SBTi, 2020).

138. For some sectors, not including scope 3 can result in pathways not being met at a collective global level, as can be seen in transition commitments made by fossil fuel companies, for example. Given their enabling role in the broader economy, financial institutions must include scope 3 activities related to their investment and lending portfolios in their SBTi targets. The PACTA tool instead compiles in a bottom-up fashion the industry-specific performance benchmarks required for translating temperature goal scenarios into portfolio allocation decisions for investors. In this way, all corporate bond and listed equity allocations by investors, as well as lending by banks, are within scope.

139. Other stakeholders may require a broader scope than entity- or portfolio-level consistency assessment. Central banks and regulators, in considering management of macroprudential risks, may choose to focus on a small number of firms for specific impacts of climate-related risks on corporate profitability, asset stranding, legal liabilities or system-wide stress tests of financial and macro channels that deduce impacts on household income and property values, for example.

140. Some methodologies broaden relevant activities beyond economic activities or transactions to also include governance, advocacy and engagement actions as part of assessing consistency. The Paris Aligned Investment Initiative Net Zero Investment Framework as well as TPI include board-level actions needed on setting net zero strategies and goals, shareholder voting strategies, and engagement in direct and collective policy advocacy efforts (PAII, 2021).

1.6.3 Decision 3: Understanding the finance flows relevant to activities and actions to be tracked

141. Once the scope of actions and activities are defined, the financial flows to realize them may be mapped to ensure they are consistent in future. Different actors will have the power to initiate different types of finance flows. These include public expenditures, grants, incentives and tax policies initiated by governments; capital expenditures, retained earnings, equity raisings and bond issuances initiated by corporations; lending and bond issuances initiated by banks; portfolio investments initiated by investors; and consumer credit, mortgages and investments initiated by households.

142. When assessing the consistency of investments in the Norwegian industry sector, the Latvian transport sector and the United Kingdom buildings sector with climate objectives, the OECD focused on real economic investments corresponding approximately to gross fixed capital formation in the System of National Accounts (SNA), including their refurbishment.

143. Science-based targets set by financial institutions must include asset classes such as project finance and corporate loans in electricity generation, commercial real estate and other sectors longer than one year[41], and listed equity, corporate bonds, exchange-traded funds and investments in real estate investment trusts. Other asset classes and finance flows that are optional to include are mortgages, SME loans, short-term debt, fund of funds, and private equity and debt.

144. While the methodology for SBTs for financial institutions focuses on whether portfolios are aligned with pathways, the PAII framework adds a second requirement to set asset allocation goals to climate solutions. It also includes sovereign bond portfolios in addition to real estate and corporate equity and fixed-income portfolios in the framework.

1.6.4 Decision 4: Identifying key metrics to track consistency

Quantitative metrics

145. Key metrics to track consistency include projected cumulative GHG emissions and whether they are within a specified carbon budget, absolute emission reductions to be achieved, emission intensities by sector-specific production and the emission intensity of value or investment.

146. The OECD studies back-tested whether investments made over a period of time, for example, 2010–2018, in

40 See SBTi manual at https://sciencebasedtargets.org/resources/files/SBTi-Corporate-Manual.pdf.

41 For fossil fuel companies, at least 95 per cent of corporate loans by total value to be covered, 67 per cent of other corporates, and for real estate, 67 per cent of m^2 of total portfolio.

specific sectors resulted in an emissions performance that was consistent with a range of different potential reference points for low-emission pathways such as taxonomies, scenarios or national trajectories known at the beginning of the time period. Therefore, the key indicators in the studies were (1) a comparison between the cumulative emissions of the sectors and subsectors over the given time period and the cumulative emissions trajectories for the same time period estimated through scenarios; (2) whether investments by activity were in line with the EU sustainable finance taxonomy; (3) whether investments perform at GHG intensities required by pathways or standards such as climate bond certification; and (4) whether investments meet other sector-specific classifications such as A-rated energy performance certificates for buildings. As the activities listed in the EU sustainable taxonomy were defined more recently (2019), the OECD studies found that fewer investments made during the given time period were consistent with the taxonomy than when the energy transition scenarios calculated in 2010 were applied as the framework to determine consistency with the low-emission pathways.

147. While both SBTi and TPI apply sector-specific physical intensity metrics of the SDA to measure companies' performance, TPI applies the measure to the carbon performance of 238 listed companies across nine sectors, whether or not they have adopted targets (TPI, 2020). SBTi companies may also use metrics on absolute emission reductions from a base year rather than intensity-based metrics (SBTi, 2020).

148. SBTi financial institutions can use other metrics that reflect the enabling role of investment and lending activities in realizing emission reductions in the real economy. In addition to using the physical intensity metrics of the SDA for relevant borrowers/investees in their portfolio, they may also measure the portfolio coverage of borrowers/investees with their own SBTs or apply a temperature rating methodology to their portfolio.

149. As a building block, financial institutions can measure the GHG emissions of their investments and loan portfolios using GHG accounting methods developed by the Partnership for Carbon Accounting Financials (PCAF). Borrower and investee emissions data are required to attribute the financed emissions using different approaches per asset class, for example, the proportion of the outstanding investment or loan amount against the property value at origination for real estate and mortgages, the total equity and debt profile for project finance, and the enterprise value, including cash for corporate instruments.

150. The financed emissions data may be used as input for target setting and measuring progress. For specific sectors such as power generation, only metrics using financed emissions and physical intensity data (kWh of electricity generation) from sectoral decarbonization approaches may be used. Other asset classes and sectors may use sector-specific intensity targets set over five to fifteen-year periods, metrics on the portfolio coverage of investees/borrowers with SBT targets in the portfolio, or portfolio temperature ratings each set over a maximum five-year period.

151. Metrics using the portfolio coverage of investees/borrowers with their own SBTs may be formulated with different weightings such as by portfolio value, GHG emissions, market capitalization for equity asset classes or enterprise value. The other metrics applicable under SBTi for financial institutions include temperate rating, a methodology developed by CDP and WWF to assess the ambition of portfolio companies based on public GHG reduction targets. First, regression models based on scenarios in the IPCC 1.5 °C scenario database are used to convert company targets into temperature scores (CDP and WWF, 2020). Default scores are used for companies with no targets in a portfolio. Company-level scores are then aggregated to generate temperature alignment at the portfolio level, with individual companies weighted by different GHG or economic metrics. Targets to align the portfolio temperature score are then set over a maximum five-year period (e.g. a financial institution commits to align its temperature score from 3.1 °C to be on a pathway well below 2 °C by 2025). The minimum ambition required each year is a linear reduction in line with a 1.75 °C portfolio by 2040.

152. Both the TPI and SBTi approaches are referenced as metrics to use under the PAII for corporate listed equity and fixed-income portfolios. Additional metrics within the PAII focus on mobilization of finance flows such as corporate capital allocation, allocation to green bonds and revenues from climate solutions as well as engagement goals for investees representing over 70 per cent of financed emissions from material sectors.

153. The table below provides more information on the quantitative metrics used.

Table 1.3

Overview of emerging methods and metrics relevant to tracking consistency with Article 2, paragraph 1(c), of the Paris Agreement

Source	Target users	Relevance to Article 2, para. 1(c)	Scope/coverage	References for consistency	Key indicators/metrics
OECD Research Collaborative	Governments	Aims to measure consistency or inconsistency of real economy investments and underlying financing	Gross primary investment in new infrastructure and equipment and the refurbishment of such assets, as well as the underlying sources of finance analysed and aggregated to present results at country and sector level	Testing a range of reference points: • Taxonomies: e.g. EU sustainable finance taxonomy • Scenarios: i.e. IEA global, regional and national scenarios per sector e.g. IEA, Energy Technology Perspectives • National decarbonization trajectories and targets: e.g. Latvia's fifth NC (2010) • Other relevant performance thresholds e.g. energy performance certificates in the buildings sector	Share of year-on-year and cumulative real economy investments by activity in a given period (e.g. 2010–2018) that is consistent or inconsistent with the different reference points tested, thereby providing a multicriteria perspective
SBTi *(CDP, WRI, World Wildlife Fund, United Nations Global Compact)*	Companies, financial institutions (banks, investors)	Sets corporate GHG emission reduction targets in line with well-below 2 °C or 1.5 °C climate scenarios	377 companies with approved targets (out of 881 companies that have committed to setting a target, across sectors and with global coverage) 60 financial institutions have committed to setting a target	• IPCC 1.5 °C and well-below 2 °C scenarios for the absolute contraction approach • IEA Beyond 2 °C Scenario from the *Energy Technology Perspectives 2017* report for the sectoral decarbonization approach • Representative concentration pathway 2.6 scenario from the IPCC Fifth Assessment Report for targets aligned with 2 °C (no longer available) • Scope 3: 2% average annual linear reductions in emissions intensity over time period or 7% for economic intensity • For financial institutions, 100 per cent of investees with SBTs by 2040	• Absolute GHG reductions compared to base year • Sector-specific GHG physical intensity (e.g. t CO_2/MWh) • GHG economic intensity (e.g. t CO_2/ global value added in USD) • Per cent annual GHG reductions • Sector-specific financed emissions intensity (for FIs only) • Per cent of investees in portfolio with SBTs (for FIs only) • Portfolio temperature ratings (for FIs only)
Transition Pathway Initiative	Investors	Assesses progress of the world's biggest and most emissions-intensive public companies in the transition to a low-carbon economy	238 globally listed companies across 9 sectors	Three pathways are used to measure consistency:[42] • Paris Pledges pathway, based on the IEA *Energy Technology Perspectives 2017* report reference technology scenario that incorporates NDCs, resulting in 2.7 °C warming by 2100 • "2 Degrees" pathway, based on the IEA 2 °C Scenario from the *Energy Technology Perspectives 2017* report • "Below 2 Degrees" pathway, based on the IEA Beyond 2 °C Scenario from the *Energy Technology Perspectives 2017* report	Sector-specific GHG intensity: • Oil and gas: g CO_2 eq/MJ • Electricity utilities: Mt CO_2/MWh • Automobiles: g CO_2/km of new vehicles on average • Airlines: g CO_2/ revenue tonne kilometre • Shipping: g CO_2/t-km • Cement: t CO_2/t cement • Steel: t CO_2/t steel • Aluminium: t CO_2 eq/t aluminium • Paper: t CO_2/t pulp, paper and paperboard

42) In the auto and aviation sectors, different approaches are used for 2 Degrees and Below 2 Degrees scenarios because of the uncertainties regarding the extent to which modal shift plays a role in meeting emission trajectories. For the auto sector, 2 Degrees refers to a scenario to "avoid-shift-improve", which emphasizes avoiding and shifting to energy-efficient modes. The Below 2 Degrees scenario emphasizes improving the carbon efficiency of vehicles. Both scenarios were developed by TPI (LSE), which was informed by 2012 modelling by International Council on Clean Transportation. For the aviation sector, the 2 Degrees scenario is based on the IEA 2 °C Scenario. The Below 2 Degrees scenario consists of TPI's own calculation of a high-efficiency scenario, which is more ambitious than the IEA Beyond 2 °C Scenario.

Source	Target users	Relevance to Article 2, para. 1(c)	Scope/coverage	References for consistency	Key indicators/metrics
PACTA tool *(2° Investing Initiative)*	Regulators, banks, investors	Calculates the extent to which corporate capital expenditures and industrial assets behind equity, bond or lending portfolios are aligned with various climate scenarios	Energy transition alignment Listed equity and corporate bond markets consisting of 40,000 companies, 30,000 securities across 8 sectors (power, auto, oil and gas, coal mining, aviation, shipping, cement and steel)	• IEA: Beyond 2 °C Scenario 1.75 °C rise estimate by 2100 (ETP 2017) power and auto sectors only, global • IEA SDS 1.7-1.8C (World Energy Outlook, 2018) power, fossil fuels and auto sectors, global • IEA SPS 2.7C (World Energy Outlook, 2018), as above • IEA CPS 3.3C (World Energy Outlook, 2018), as above • Greenpeace: Energy Revolution 2C Power only, all regions except Europe • BNEF: outlook reference scenario, power only, global • SBTI: Steel, aviation, shipping, cement, global	• Power capacity by technology in megawatts (MW) • Oil production in barrels per year • Gas production in billions of cubic feet per year • Coal production in tonnes of coal equivalent per year • Auto production per year • GHG emission pathways in the aviation, shipping, cement and steel sectors
EU climate transition and Paris-aligned benchmarks *(European Community)*	Index providers	Sets the minimum requirements for benchmark indices claiming climate transition or Paris-aligned labels, in line with EU regulations on disclosure for ESG index providers	Indices based on asset classes: listed equity, fixed income, hedge funds, private equity/ debt, infrastructure, commodities	• IPCC 1.5 °C scenario with no or limited overshoot (Years 2020-2030, Table 2.1 Rogelj et al 2018); to follow this trajectory the global economy should decrease its emissions by 7% per year	• 7% on average per annum reduction of GHG intensity at portfolio (index) level (t CO_2 eq/year/M€) of which € represents enterprise value (sum of market capitalization and book values of total debt minus cash)
Network for Greening the Financial System *(NGFS)*	Central banks and regulators	Scenario analysis of potential economic and financial impacts of physical and transition risks related to climate change and Paris Agreement goals	Depending on the objectives of the assessments, the depth of analysis can differ from a focus on a small number of firms and asset classes or system-wide stress tests of financial and macro channels	Three reference scenarios based on existing transition scenario databases for the IPCC Special Report on 1.5 °C and relevant physical risk data • Orderly: Early ambitious action to achieve a net zero economy before 2070, 67 per cent chance of limiting warming to 2 °C; • Disorderly: Late disruptive, sudden or unanticipated action, climate policy follows NDCs until 2030 followed by a sharp rise in emission prices to reach net zero by 2050; • Hot house world: Limited action with significant global warming and increased exposure to physical risk with an estimated temperature rise of over 2 °C by 2050 and close to 4 °C by 2100.	Suggested metrics to translate financial risks to inform decision-making: • Asset impairment, • Mark-to-market valuation, • Risk weighted asset ratios, • Capital buffer depletion, • Return on equity, and • Change in business model (portfolio allocation, lending paths, insurance coverage and pricing)
Paris Aligned Investment Initiative Net Zero Investment Framework	Investors	A framework that allows investors to align with the goals of the Paris Agreement	Four investor networks in Asia, North America, Australasia and Europe working to develop a methodology covering sovereign bonds, corporate listed equity and fixed income, and real estate (future work focuses on infrastructure and private equity and alignment with adaptation/resilience)	At a minimum, pathways used by investors, companies and data providers should: • limit warming to 1.5°C with 50 per cent probability; • Reach global net zero emissions by 2050; • Provide differentiated pathways for regions and sectors which may require net zero emissions earlier or later, consistent with the global goal. • Have a global peak emissions year of the current year or later. • Ideally be (or linked to) a multi-sector model taking account of all emissions sources. • Rely on a limited volume of Negative Emissions Technologies (NETs) to 2050.	At portfolio level • Absolute or intensity based GHG reductions at portfolio level • Allocation to climate solutions based on percentage of revenues or capex from assets under management At asset class level • percentage of assets under management invested aligning to net zero • percentage of financed emissions subject to direct or collective engagement and stewardship actions • allocation to green bonds

Qualitative approaches and indicators

154. As discussed in the 2018 BA and noted above, the 2017 guidance from the TCFD on how to disclose climate risks and opportunities for financial market participants allows for qualitative indicators and information to be obtained that could be relevant to assessing whether finance flows deriving from these participants may be consistent with a pathway towards low-emission and climate-resilient development. The guidance covering four core elements of governance, strategy, risk management, and metrics and targets, has, since 2018, filtered into: various voluntary and reporting frameworks, such as the United Nations PRI and CDP; analytical initiatives, such as TPI; engagement initiatives, such as Climate Action 100+; and regulatory initiatives, such as the EU non-financial reporting directive.

155. One example of using qualitative indicators is how the TPI analysis of carbon performance of the largest and most emissions-intensive corporations is conducted in tandem with a management quality assessment where 19 qualitative yes/no indicators test whether a company has implemented a particular carbon management practice (see figure 1.7). Each indicator response is used to categorize companies as being at one of five levels of management quality:

- Level 0. Unaware of (or not acknowledging) climate change as a business issue;
- Level 1. Acknowledging climate change as a business issue: The company acknowledges that climate change presents business risks and/or opportunities, and that it has a responsibility to manage its GHG emissions. This is the point at which companies adopt a climate change policy;
- Level 2. Building capacity: The company develops its basic capacity, management systems and processes, and starts to report on practice and performance;
- Level 3. Integrating into operational decision-making: The company improves its operational practices, assigns senior management or board responsibility for climate change and provides comprehensive disclosures on its carbon practices and performance;
- Level 4. Strategic assessment: The company develops a more strategic and holistic understanding of risks and opportunities related to the low-carbon transition and integrates this into its business strategy decisions.

156. In 2020, the AIIB and Amundi proposed a climate change investment framework that translates the three objectives of the Paris Agreement into fundamental metrics that investors can use to assess an investment's level of progress towards achieving climate change mitigation, adaptation, and contribution to the low-carbon transition. The framework is tested through an emerging market corporate bond portfolio in the region. Key metrics applied in the framework include qualitative assessments of whether the corporate is showing efforts to reduce emissions across its value chain; exposure to physical climate risks and if efforts are being taken to increase resilience, and whether steps are being taken to increase revenues from climate solutions (AIIB and Amundi, 2020).

157. In 2019, the EU finalized a supplement on climate-related reporting to the guidelines on non-financial reporting which integrates the recommendations of the TCFD (EU, 2019). The supplement includes a list of KPIs for companies, including insurance companies, and banks to use in their financial reporting (see). In addition to KPIs related to GHG emissions or energy discussed as part of measuring consistency with the climate scenarios described in table 1.3, other KPIs relate more directly to low-emission finance flows or high-carbon finance flows (e.g. per cent of green bonds to total bonds issued by the company or held by the investor, per cent of lending portfolio or amounts, per cent of total risk exposure of high-carbon or low-carbon sectors). Such metrics on 'green' and 'high GHG emission' finance flows are also used in methodologies examining the alignment of the lending portfolios of DFIs and commercial banks with the Paris Agreement.[43] KPIs related to climate-resilient development also feature metrics, including per cent book value or lending/investment portfolio tied to assets exposed to physical climate risks; number of climate-related insurance underwriting products offered in geographic areas exposed to extreme weather events; and losses attributed to expected or non-expected natural catastrophes.

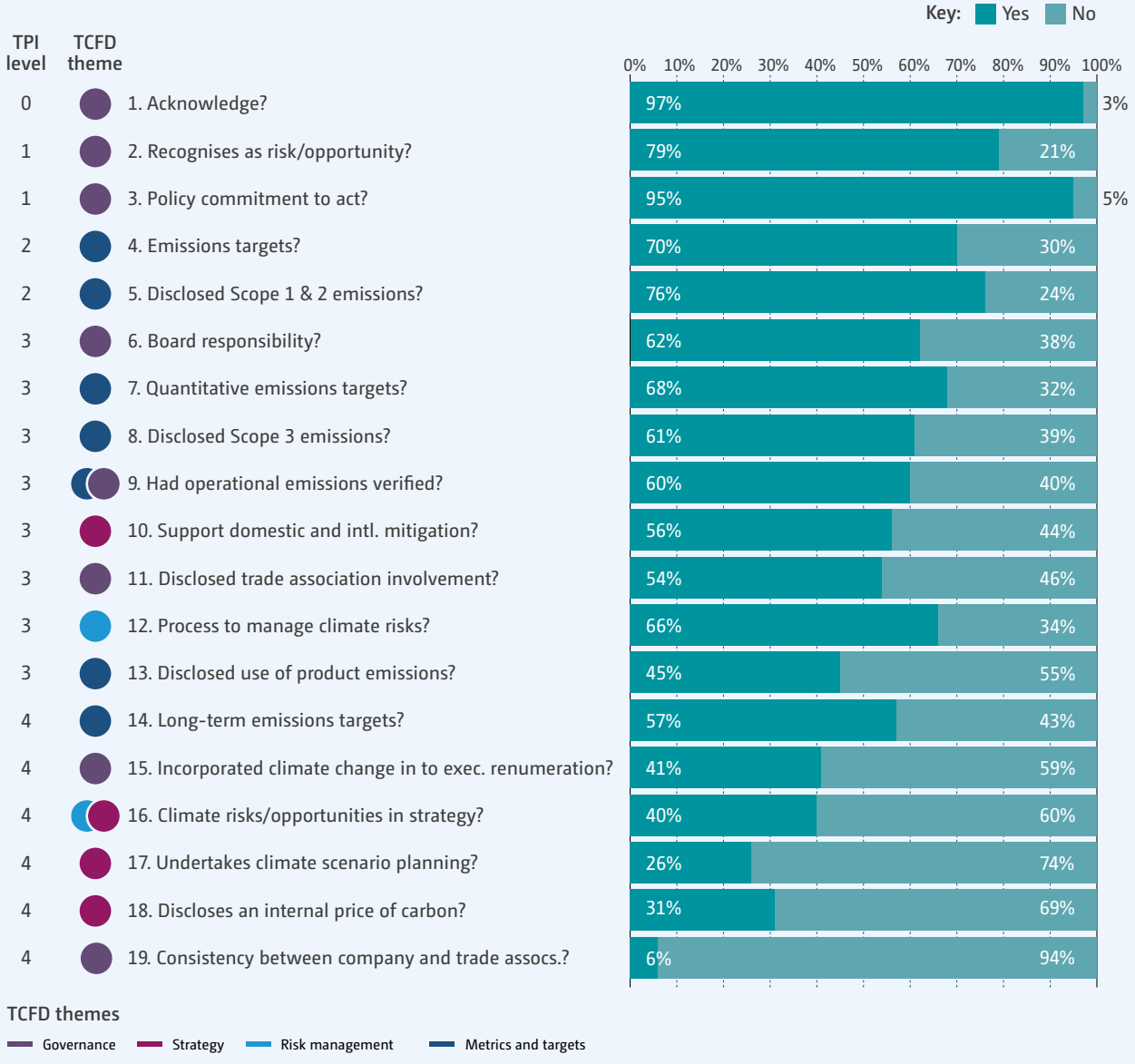
158. At the government level, metrics may be combined under a framework to track how governments are operationalizing progress on Article 2.1c. An analysis of twenty-one Latin American countries developed a sustainable finance index based on four variables of sustainable and carbon-intensive public budgets and revenues (Guzman and de la Fuente, 2021). A consortium of four think tanks (Whitley et al, 2018) have proposed four key tools related to:

43) See OCI, 2020, Germanwatch et al, 2020, and Rainforest Action Network for example.

- Financial policies and regulation such as disclosure and reporting, and lending requirements. Potential metrics to track progress on this element include a number of countries mandating climate-related disclosure;
- Fiscal policy such as carbon pricing regulations and green budgeting. Potential metrics include scale of green or high-emission subsidies, effective carbon price rate and scale of sovereign green bond issuances;
- Public finance, such as concessional and non-concessional finance, directed by public DFIs. Potential metrics include number of institutions with policies restricting fossil fuel finance, amount of climate finance flows and value or number public pension funds divesting from fossil fuels;
- Information instruments to influence behaviour through awareness-raising activities such as campaigns, stress testing and certification and labelling initiatives. Potential metrics include scale of AUM of financial institutions conducting climate risk assessments, subnational governments with green finance strategies, scale of corporate green bond issuances and level of carbon exposure of investment portfolios.

Figure 1.7

Transition Pathway Initiative management quality indicators, mapped against core elements of the Task Force on Climate-related Financial Disclosures (percentage of 332 companies)



Source: TPI, 2020.

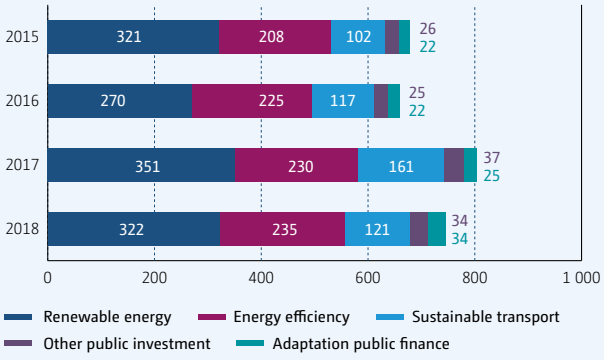
Chapter 2

OVERVIEW OF CURRENT CLIMATE FINANCE FLOWS IN 2017–2018

Insights on global climate finance

Global climate finance flows were **16 per cent higher** in 2017–2018 than in 2015–2016, reaching an annual average of USD 775 billion.

Since 2015-2016, the global weighted levelized **cost of electricity for solar PV, onshore and offshore wind have fallen 29 per cent, 18 per cent and 10 per cent respectively.**

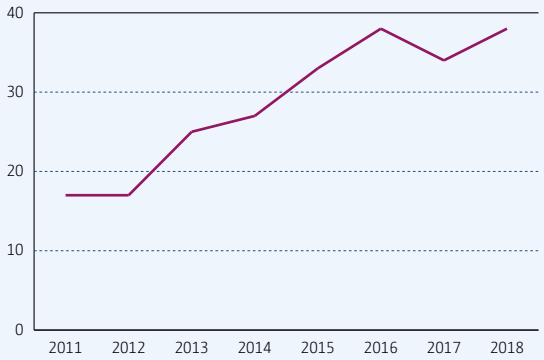


Spending on battery **electric vehicles increased 164 per cent** from 2015-2016 to 2017-2018, with USD 51 billion spent in 2018, and investment on charging infrastructure, USD 3.4 billion in 2018 was captured for the first time.

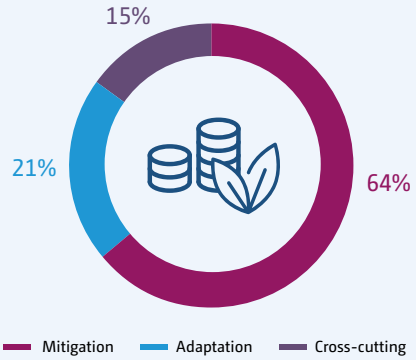
Data on private investment, particularly in adaptation and in the agriculture and forestry sectors, **remain difficult to capture due to lack of reporting**.

Insights on flows from developed to developing countries

Climate-specific finance reported by Annex II Parties **increased by 13 per cent in 2017-2018** period, on a comparable basis to the 2015-2016 period, reaching USD 38 billion in 2018.

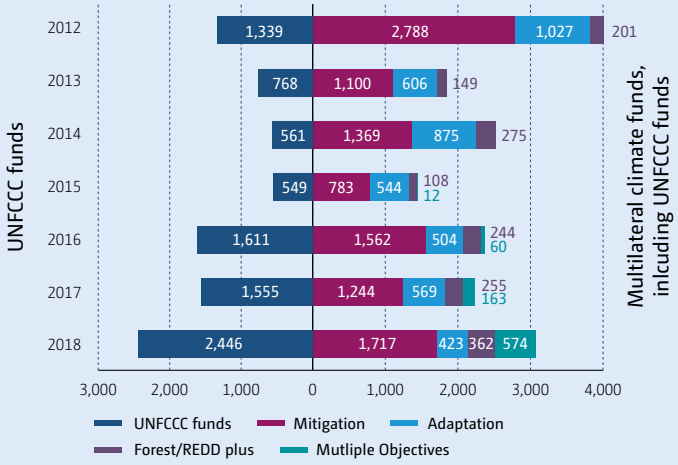


Mitigation finance makes up 64 per cent of climate-specific finance through bilateral, regional and other channels, with the share of adaptation finance growing from 15 per cent in 2015-2016 to 21 per cent in 2017-2018



UNFCCC funds and multilateral climate funds approved USD 2.2 billion and USD 3.1 billion for climate finance projects in 2017 and 2018, respectively. The annual average for 2017–2018 (USD 2.7 billion) represents an **increase of 39 per cent** compared with those in 2015–2016, owing primarily to increases in project approvals by the GCF Board and the GEF Council.

The Green Climate Fund accounted for 67 per cent of all climate finance from multilateral climate funds in 2018.



Accuracy in measuring data on private climate finance flows mobilised from public interventions has improved since the last BA. USD 14.6 billion estimated in 2018, representing a **44 per cent increase on 2016**.

2.1 Introduction

159. This chapter provides an updated overview of climate finance flows in the years 2017 and 2018, complementing the findings for the period 2011–2016 presented in the three preceding BA reports. Data have been gathered and compiled from multiple sources to arrive at aggregate estimates for global climate finance flows, including flows from developed to developing countries and flows among developing countries: South–South cooperation. It is important to note that several databases are used to illustrate flows from developed to developing countries, without prejudice to the meaning of those terms in the context of the Convention and the Paris Agreement, including but not limited to Parties included in Annex II/Annex I to the Convention to Parties not included in Annex I to the Convention and MDBs; OECD members to non-OECD members; OECD DAC members to countries eligible for OECD DAC official development assistance; and other relevant classifications from various sources. However, any such reporting differences are explicitly laid out throughout this chapter.

160. Estimates of climate finance flows are based on activities that correspond to the operational definition of climate finance adopted in the 2014 BA report (see section 1.4 in chapter I). It is important to note that 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.

161. Section 2.2 focuses on estimates of global climate finance flows. Sections 2.3, 2.4 and 2.5 focus, respectively, on estimates of domestic climate finance flows, estimates related to South–South cooperation on climate finance and estimates on finance flows from developed to developing countries.

162. In addition to the chapter 4 on Article 2, paragraph 1(c) of the Paris Agreement, section 2.6 takes a broader view of financial flows – encompassing such areas as bank lending, bond markets, listed equity, private equity, insurance and reinsurance, AUM and financial services – in order to enhance understanding of the available data sets related to all financial flows and investment decision-making processes that may inform consistency with Article 2.1c.

2.1.1 Data gaps and data quality

163. In the Fourth BA, several new data sources are used to track climate finance in areas that were not previously included in the scope. Wherever possible these numbers have been updated retroactively to allow for trend comparisons. This includes:

- Charging infrastructure investments available from the IEA. These estimates are derived from figures published in the IEA's World Energy Investment Report in 2019 (IEA, 2019a) and combine estimates of public and private investment in EV charging installation with prevailing cost information.
- Non-energy infrastructure project finance transactions from IJGlobal. This includes both public and private finance for low carbon transport, water and waste, and public expenditure on climate-relevant investments in municipal infrastructure and the built environment.
- Use of proceeds data for private and municipal green bond issuances from the CBI. Where available, project-level data contained in post-issuance reporting were used to capture private and subnational government expenditure in low-carbon transport and energy efficiency, and public finance for municipal infrastructure, water, waste and disaster prevention.
- Blended finance transactions from Convergence, a private database tracking blended transactions, which combine commercial and concessional capital resources against the SDGs.

164. Despite these additions, there still remains a significant gap in the coverage of data on sectors and sources of climate finance, particularly with regard to private investment. While the coverage of data on private finance in the renewable energy sector remains extensive, data on private investment in energy efficiency, land use and adaptation remain very limited. For both energy efficiency and adaptation, the relevant investments are often components within larger projects, requiring additional information which private actors are unlikely to report voluntarily. Moreover, for investments in both fields to be effective, they must be consistent with low-carbon and climate-resilient pathways (respectively) and not just represent an arbitrary improvement over business-as-usual. While the reported estimates of total energy efficiency are made against a baseline rather than including total investment costs in the most energy-efficient projects, there remains insufficient understanding of the financial sources and instruments used in such investments. In the sustainable transport sector, efforts have been made to improve estimates on public and private investment in EVs and their charging infrastructure. However, data on

financial sources and instruments for investment in public mass transit across countries are lacking.

165. The estimates for global climate finance flows for 2017 and 2018 in table 2.1 below have been collated from various data sources. In order to obtain accurate, comprehensive and comparable global climate finance estimates, data sources referenced below have been assessed against the following markers (detailed in annex L):

- **Data quality** denoting the quality of financial transaction information. Project- or product-level data, including geographic source and destination of flows, tend to be reliable. A high level of data quality is important to ensure that the finance flows counted result in projects that are consistent with a low GHG emissions and climate-resilient pathway;
- **Completeness of the data** denoting the estimated level of coverage of all climate-related flows in a given sector. A high level of completeness for a database would mean availability of full and granular data on sources, sectors and instruments.

166. Sources of data on global climate finance flows typically are reported in USD-denominated figures and at face value in the given reporting year. This introduces significant uncertainties in year-on-year comparative analyses given significant fluctuations in foreign exchange rates as well as inflation effects. Estimates of climate finance flows by sector are discussed further in the following sections, which also take into account the quality and completeness of the data.

2.2 Estimates of total global climate finance

2.2.1 Global: Overview of total global public and private climate finance flows based on the best available data

167. This section provides an overview of global public and private climate finance flows over the years 2015–2018 based on the best available data including a breakdown by sector, where available, in sections 2.2.1–2.2.6. Figure 2.1 provides an overview of global climate finance flow estimates broken down by sector and by public and private source.

168. The aggregated global climate finance is presented in table 2.1. From 2015, the estimates of global climate finance flows are presented in lower and higher bounds due to ranges in estimates from multiple data sources that apply different methodologies. In particular, estimates on energy efficiency and sustainable transport differ among data sources, resulting in lower and higher ranges of estimates.

169. At the higher bound, climate finance flows in 2017–2018 increased by 16 per cent since 2015–2016, reaching USD 804 billion in 2017 and USD 746 billion in 2018. At the lower bound, climate finance was USD 607 billion in 2017 and USD 540 billion in 2018. The previous estimates for 2015 and 2016 have been updated to take into account new data sources (as described in section 2.1.1) that were not included previously.

Box 2.1

Addressing double counting across different databases

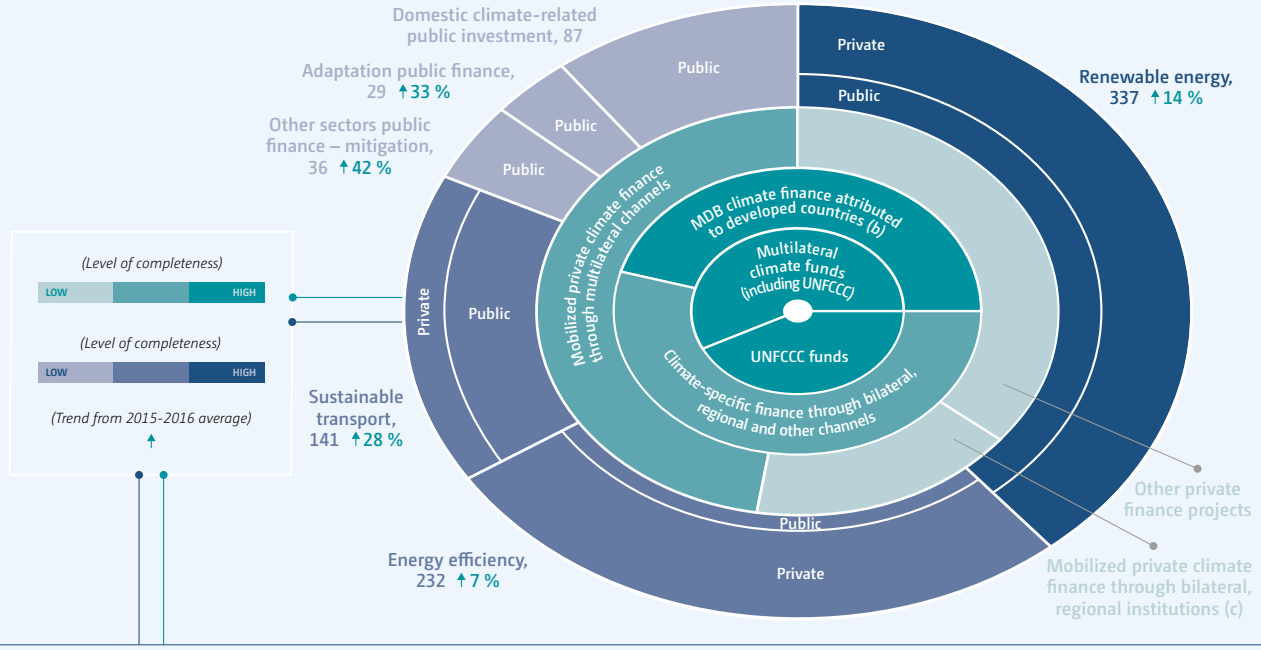
In compiling global estimates, efforts have been made to avoid the double counting of financial flows that may go through multiple stages of development of a project. The aggregated estimates only track primary financial transactions and investment costs (i.e. the financing for a new physical asset or activity with direct or indirect greenhouse gas mitigation or adaptation benefits). Some of the exclusions to avoid double counting include:

- Private research and development for new technologies and investment in manufacturing for low-GHG and climate-resilient development because at the technology deployment stage such costs are capitalized and factored into the investment amounts of new projects that implement these technologies.
- Secondary market transactions which do not represent new investment targeting climate-specific outcomes, but rather money being exchanged for existing assets. The use of proceeds data from private and municipal green bond issuances from the CBI include only projects representing new investments and nor reissuances.
- Policy-induced revenue support mechanisms such as feed-in tariffs or other public subsidies whose primary function is to pay back investment costs.

The aggregate global estimates (section 2.2, table 2.1, figure 2.1) are presented as lower and higher bound ranges based on the quality and completeness of data sources. The lower bound estimates aggregate sectoral numbers from data sources with a high level of data quality marker, while higher bound estimates include all available data sources. Flows to developing countries (section 2.5.5) comprise finance tracked through different sources and channels (multilateral and bilateral). However, these are not aggregated in the global estimates to avoid issues of double counting across databases.

Figure 2.1

Climate finance flows in 2017–2018 (billions of USD)

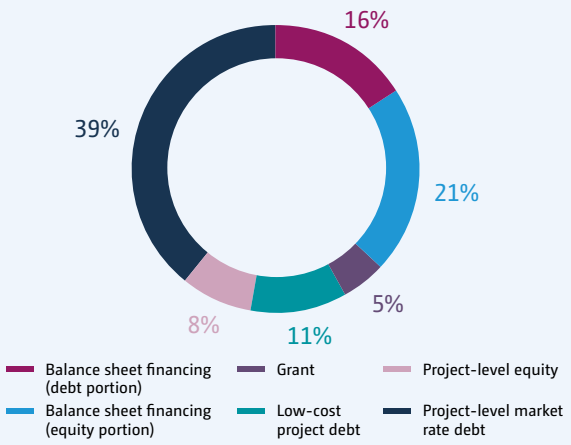


		2017	2018	Sources of data and relevant section
Global total flows	Renewable energy	351.4	322.4	Section 2.2.2 CPI 2020 based on multiple sources
	Public	66.5	51.4	
	Private	284.9	271.0	
	Energy efficiency	229.9	234.6	Section 2.2.3 IEA Energy efficiency Market Reports/CPI
	Public	35.7	32.3	
	Private (a)	194.2	202.3	
	Sustainable transport	160.5	120.5	Section 2.2.4 IEA World Energy Investment reports/ CPI 2020 based on multiple sources
	Public	118.1	70.9	
	Private	42.4	49.7	
	Other sectors public finance – mitigation	37.4	34.4	Section 2.2.5 (see notes) CPI 2020 based on multiple sources
	Adaptation public finance	24.7	34.1	Section 2.2.6 CPI 2020 based on multple sources
	Domestic climate-relate public investment	86.7	86.7	Section 2.3 BURs, CPEIRs, I4CE, IDB, UNDP, various government reports
Flows to non-Annex I Parties	UNFCCC funds	1.5	2.4	Section 2.5.2 Fund financial reports, CFU
	Multilateral climate funds (including UNFCCC)	2.2	3.1	
	Climate-specific finance through bilateral, regional and other channels	28.1	31.8	Section 2.5.1 Annex II Party Biennial Reports
	MDB climate finance attributed to developed countries (b)	24.1	25.8	Section 2.5.2 OECD 2020a
	Mobilized private climate finance through multilateral channels	10.8	10.8	Section 2.5.4 OECD 2020a
	Mobilized private climate finance through bilateral, regional institutions (c)	3.7	3.8	
	Other private finance projects	5.3	11.0	Section 2.5.4 CPI 2020 based on multiple sources

Notes: a) Value discounts transport energy efficiency estimates by 8.5 per cent to account for overlap with EV estimates, same as in the previous years. b) Other public sector investments include agriculture, forestry, land use, and natural resource management (see section 2.2.5), transmission and distribution systems, waste and wastewater, policy and national budget support and capacity-building and other cross-sectoral investments. c) From Annex II to non-Annex I Parties. Values derived from calculating equity shares of Annex II Parties per MDB multiplied by the climate finance provided to non-Annex I Parties from MDBs' own resources. d) Estimates include private finance mobilized through public interventions from developed countries. e) This includes private finance in addition to finance through bilateral and multilateral channels and institutions (CPI, 2020a).

Figure 2.2

Breakdown of climate finance by financial instrument, 2017–2018



170. Data on financial instruments used are not available for all sources, particularly for the energy efficiency and sustainable transport sectors. Based on the available information on the lower bound estimates of global climate finance flows (i.e. USD 574 billion) (Table 2.1), project-level market rate debt comprised 39 per cent of the flows (figure 2.2) followed by balance sheet equity (21 per cent) and balance sheet debt (16 per cent). Grant finance represented approximately 5 per cent of total global finance flows (CPI, 2020a).

2.2.2 Estimates of investment in renewable energy

171. Investment in new renewable energy generation projects reached an all-time high of USD 351 billion in 2017. This represents a 31 per cent increase from the 2016 level, largely driven by a spike in capacity

Table 2.1

Estimates of global climate finance flows, 2011–2018 (billions of USD)

Estimates	2011/2012	2013	2014	2015	2016	2017	2018
Lower bound	340	339	392	472	456	-	-
Higher bound	650	687	741	-	-	-	-
Revised lower bound based on methodological changes				496	467	607	540
Revised higher bound based on methodological changes			584	679 (680*)	659 (681*)	804	746

Notes: Due to changes in IEA's energy efficiency methodology from 2014 onwards, the estimates before 2014 may not be directly comparable to 2014-2018 estimates.

Table 2.2

Estimates of global investment in renewable energy technologies, 2011–2018 (billions of USD)

	2011	2012	2013	2014	2015	2016	2017	2018
CPI - total		265	239	289	321	269	351	322
Public			*35*	*47*	*62*	*52*	*66*	*51*
Private			*204*	*242*	*259*	*217*	*285*	*271*
GTREI	287	252	233	288	318	294	325	288
BNEF (excluding Corporate and Government R&D)	290	257	234	294	324	310	346	312
BNEF (including Corporate and Government R&D)	322	290	267	327	357	344	386	357

Source: CPI (2020); Global Trends in Renewable Energy Investments: Frankfurt School–UNEP Centre (2018 and 2019); BNEF.

additions, particularly in China, the United States of America and India, on the back of decreasing technology costs (see Box 2.2). The decline in renewable electricity generation investments in 2018 was primarily due to a slowdown in Chinese solar investment and the weakening growth in wind capacity outside of China and the United States (CPI, 2019a and FS-UNEP, 2019).

172. In the GTREI 2019 report, the FS–UNEP Centre estimates renewable energy investments at USD 325 billion and USD 288 billion in 2017 and 2018, respectively. Both CPI and GTREI use the BNEF database on renewable energy investments to estimate finance flows. CPI estimates focus solely on new project investments and are on average 3 per cent higher over the period 2012–2018 than GTREI figures because they include investment in solar water heaters, which is not covered by GTREI, as well as international technical assistance and capacity-building activities focused on renewable energy. On the other hand, GTREI estimates include corporate and government R&D investments, venture capital/private equity investments for technology development and early-stage companies, and finance raised on public markets through initial public offerings.

173. In 2017–18, solar PV and onshore wind consolidated their dominance in the renewable energy market, representing, on average, 77 per cent of total investment in the sector. Offshore wind represented, on average, 7 per cent of total investment in renewable energy, whereas other technologies, such as hydropower (including pumped hydropower), biomass, biofuels, geothermal and marine energy, altogether contributed to 9 per cent of total finance (IRENA, 2020).

174. The BNEF database also includes investment data for energy-smart technologies and low carbon services and support like smart meters and energy storage, which are not covered by the GTREI data. Investments in energy-smart technologies increased from an average of USD 46 billion in 2016 to USD 56 billion and USD 61 billion in 2017 and 2018, respectively. Investments in low-carbon services averaged USD 5 billion over the period 2016–2018.

175. Investment in stationary battery storage, including grid-scale battery and behind-the-meter battery, was estimated at over USD 4 billion in 2018, a 45 per cent increase compared to 2017 (IEA, 2019a) wherein capacity additions continued to outpace cost declines. While grid-scale battery storage capacity additions was led by Europe, the United Kingdom, the United States and China, behind-the-meter battery capacity additions was led by the Republic of Korea, supported by tariff design.

2.2.3 Estimates of investment in energy efficiency

176. Estimating global investment in energy efficiency remains less straightforward primarily for three reasons. First, such investments are often components within larger projects, such as the installation of more efficient lighting or heating systems in buildings. MDBs and DFIs report explicitly on loans to improve energy efficiency, isolating the specific component in the overall expenditure. However, for the private sector, these approaches may represent a high burden for reporting on a voluntary basis, particularly when energy efficiency investments are financed in a similar way to other activities within an overall project.

177. Second, energy efficiency financing relies on estimating baselines for a business-as-usual investment in a specific energy-using product or project and how much a more energy-efficient substitute would improve on the baseline. However, these baselines, typically estimated by taking the average existing energy efficiency of products on the market or by looking at minimum regulatory standards, are subject to change over time.[44]

178. Third, lack of understanding of the extent to which the energy efficiency investments are consistent with low-carbon and climate-resilient pathways. Although the energy savings implicit in greater investment in energy-efficient products and services may lead to a reduction in GHG emissions, it is unclear whether such improvements are sufficient to bring the building, industry plant or mode of transport to the level of emission intensity necessary to limit global temperature increase to below 1.5 or 2 °C. Also, even if these investments comply with the minimum energy efficiency standards in some countries (information not included in the IEA estimates quoted above) may be aligned with the necessary emissions intensity pathways.

44) For example, the baseline may be set to reflect the existing average energy performance of building stock at 100 kWh m^{-2}: any investments that resulted in buildings performing below that baseline would then be considered to be investments in energy efficiency. Alternatively, a minimum energy performance standard of 75 kWh m^{-2} may apply to all new building stock: any investments in buildings that performed better than this standard would then be regarded as investments in energy efficiency.

Box 2.2

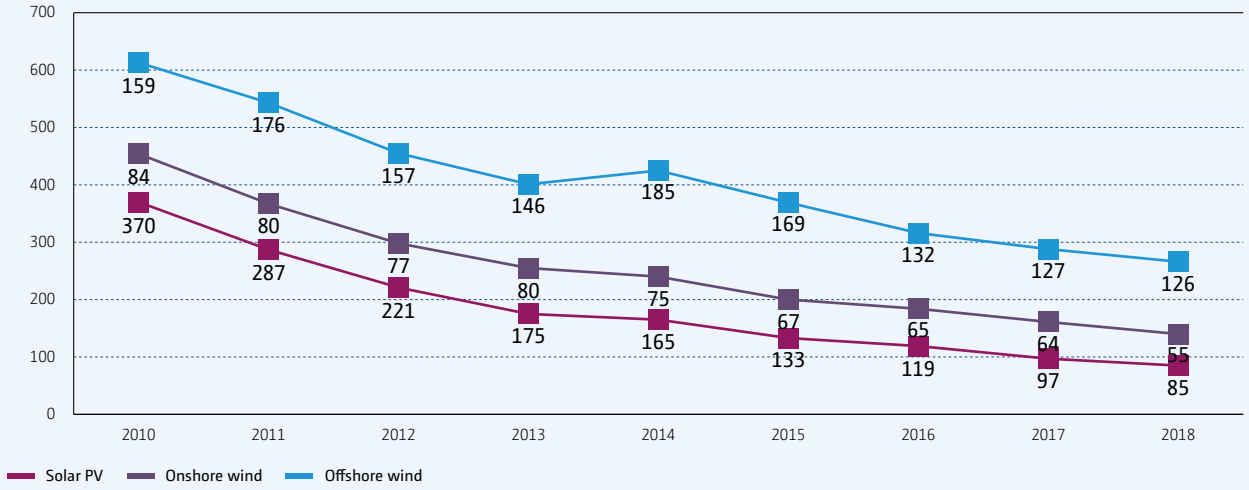
Analysis of cost trends and installed generation of renewable energy projects

During 2010–2018, the global weighted levelized cost of electricity (LCOE) for solar PV, and onshore and offshore wind fell by 77 per cent, 35 per cent, and 21 per cent, respectively (figure 2.3), and has continued to decline throughout 2018 (IRENA, 2019a). Since the 2015-2016 period, they have fallen 29 per cent, 18 per cent, and 10 per cent respectively. This is primarily attributed to the continued reduction in installed cost due to declining prices for solar PV modules and wind turbines and ongoing reductions in balance of system costs underpinned by more competitive global supply chains and improvements in technology and manufacturing processes.

The decreasing LCOEs implies that each dollar invested in these technologies bought more generating capacity than in previous years (figure 2.4 below). For instance, in 2012, the 75 GW of new capacity additions in renewables technologies translated into an investment value of USD 265 billion. In 2018, twice that level of new renewable energy generation capacity was commissioned, but investment only increased by 22 per cent, to USD 322 billion.

Figure 2.3

Global weighted levelized cost of electricity for solar PV, onshore wind and offshore wind (2010-2018, USD/MWh)

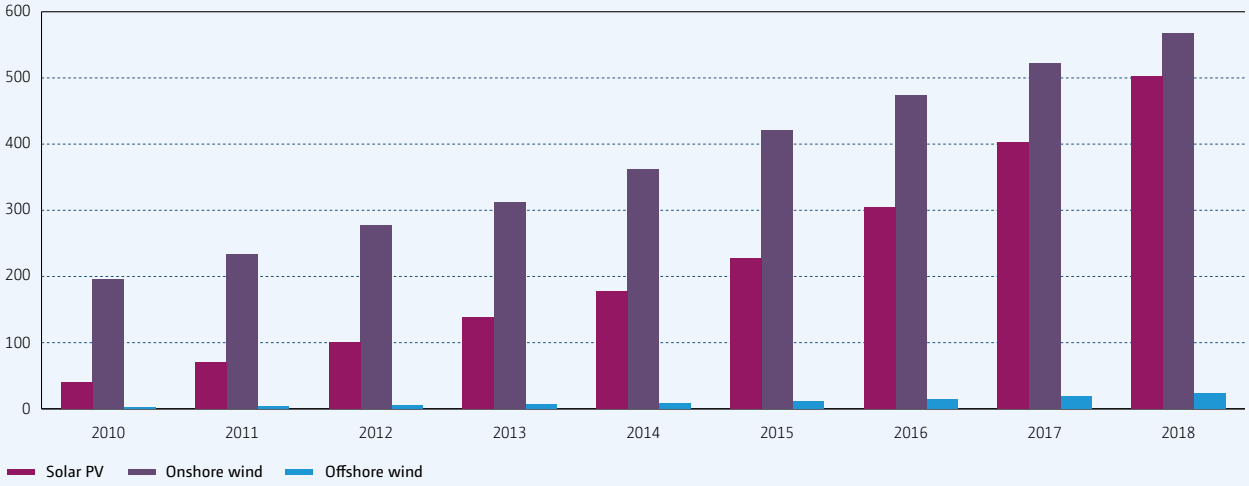


Note: The LCOEs are in real 2018 USD adjusted for the effects of inflation.

Source: IRENA, 2019a.

Figure 2.4

Global cumulative installed capacity of electricity for solar PV, onshore wind and offshore wind (2010–2018)



Source: IRENA and CPI 2020.

Table 2.3

Estimates of global investment in energy efficiency technologies, 2011–2018 (billions of USD)

	2011	2012	2013	2014	2015	2016	2017	2018	Data sources
Previous BA reports	110-300		365 (334)	365 (337)					IEA, HSBC, GEA, CPI
Adjusted for comparison in previous years				**209**	**213**	**231**	**239**	**240**	**IEA**
Segments									
Buildings									
Incremental investment in EE tech				108	118	133	140	139	IEA
Total in EE technologies				-	388	406	423		IEA
Total in investment in NZEB		<1			15				IEA, HSBC (2012 estimate)
Industry									
Incremental investment in EE tech				37.5	39	37	35	40	IEA
Transport									
Incremental investment in EE tech				62	56	60	60	61	IEA
Public EE investments (CPI)				26	26	33	36	32	CPI
Total Private EE investments				**183**	**187**	**198**	**204**	**207**	

Source: (UNFCCC, 2016), (IEA, 2018b, 2019a).

a. The total incremental investment estimate for 2015 across the three sectors of USD 221 billion was revised down by IEA in 2017 to USD 213 billion to take into account methodology improvement for estimating investments in freight transport. Transport efficiency estimates include incremental costs of EVs which have been discounted from the total global climate finance estimates in figure 2.1.

179. The IEA defines energy efficiency investment as the incremental spending to acquire a more efficient alternative that consumes less energy than would otherwise have been used to provide the service, such as lighting, heating or mobility, had the consumer not bought a more efficient option (i.e. the baseline). Based on this methodology, the investments in energy efficiency have remained stagnant in the range of USD 230–240 billion for a period between 2016 and 2018.

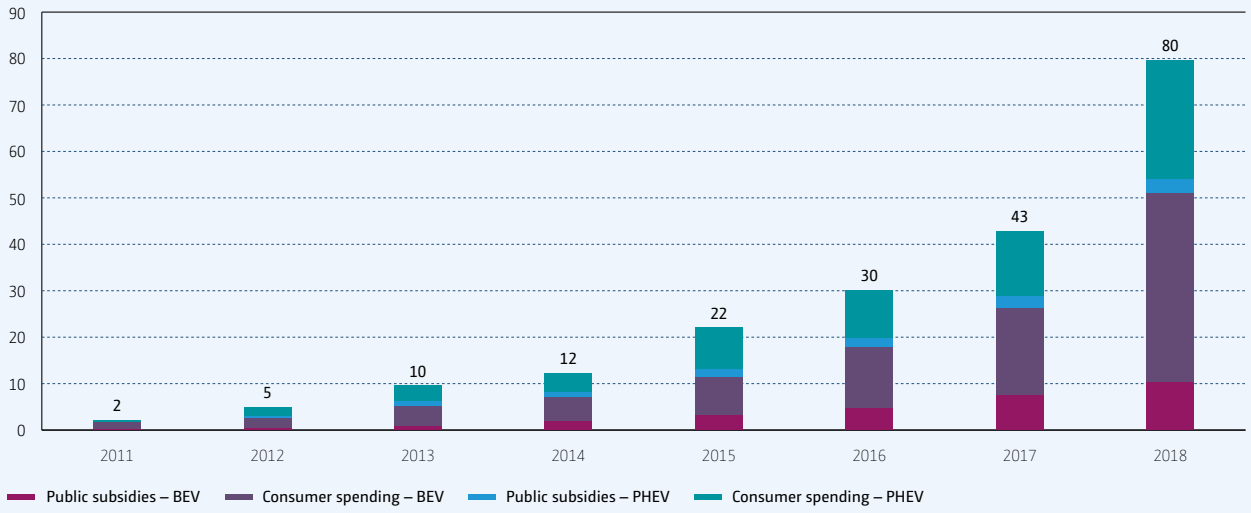
180. CPI estimated public investments in energy efficiency, based on international development finance data and reporting by DFIs and MDBs, averaging USD 34 billion between 2016 and 2018. However, there is limited information to assess to what degree these data overlap with the IEA data.

2.2.4 Estimates of investment in sustainable transport

181. Transport emissions account for over 23 per cent of the total energy-related carbon emissions (IPCC, 2014). These are also expected to grow at a faster rate due to rising transport demand per capita on account of rising incomes and development of infrastructure.

Figure 2.5

Estimates of global investment in EVs, BEVs, and PHEVs, 2011–2018 (billions of USD)



	2011	2012	2013	2014	2015	2016	2017	2018
Total Public Investment (subsidies)	0.32	0.79	1.75	2.79	4.80	6.43	10.10	13.17
Total Private Investment (consumer spending)	1.76	4.19	7.82	9.49	17.26	23.80	32.65	66.47

Source: IEA, 2020a; CPI, 2020a.

Notes: IEA and CPI collected data on the country-level sales, prices and technical specifications of all the EV models available in different countries, together with the incentive structure for EV adoption like direct rebates for retailers, manufacturers and consumers, tax exemptions or differentiated taxes for EVs compared with diesel and petrol vehicles. These data are then used to impute the total investments in the EV sector as a sum of domestic public investment (total subsidy contribution/value of tax break) and private investment (total consumer spending in the form of subsidized price/pre-tax sale price).

182. Sustainable transport data captured in this section include public and private investment in EVs, charging infrastructure for EVs and urban and inter-urban mass transit projects typically funded through government investment. Investment information on urban mass transit projects remains limited, with the exception of reporting from DFIs and MDBs, and project finance transactions from IJ Global.

183. The global stock of electric passenger cars increased to 5.1 million in 2018 compared to 3.1 million in 2017, an increase of 62 per cent. This was primarily due to supportive government policies and incentives to bridge the gap between electric and conventional vehicles, and deployment of charging infrastructure and the battery technology value chain. This momentum was reinforced by private sector driven technological advancements and production capacity expansion (IEA, 2019b). China remained the largest electric car market, followed by Europe and the United States. Despite the growth in the EV sector, electric cars accounted for only 1 per cent and 2.4 per cent of the global car sales in 2017 and 2018, respectively.

184. In line with the increase in EVs, the number of charging points globally are estimated at 5.2 million in 2018, up by 44 per cent compared to 2017. The data on publicly accessible fast chargers are gathered from various country estimates[45], complemented by other publicly available data sets[46]. However, estimates for private chargers are challenging and calculated using country-level coefficients of chargers per EV sold. The total EV charging infrastructure investments increased from USD 2.2 billion in 2017 to USD 3.4 billion in 2018 (IEA 2019a and CPI estimates). Out of this, public spending was estimated at USD 0.8 billion and USD 1.3 billion for 2017 and 2018, respectively. The corresponding estimates for private spending were USD 1.35 billion and USD 2.10 billion.

45) These include the United States, Brazil, the European Union, South Africa, the Russian Federation, China, India, Japan and other South East Asian countries.

46) For example see http://www.chinabaogao.com/.

185. Investments in other urban transport modal change and inter-urban transport projects showed a 33 per cent increase in 2017 to reach USD 132 billion (figure 2.6), underlining growing public sector commitments to pursue low-carbon transport as a key component of climate-smart investment strategies and support from the private sector. On the other hand, public investment declined significantly in 2018. The decline in public sector investment was primarily due to decreased spending on sustainable transport infrastructure projects in the East Asia and Pacific region (IDFC, 2019).

2.2.5 Estimates of investment in sustainable agriculture, forestry and other land uses

186. Global food systems contribute approximately 20–30 per cent of global GHG emissions including from farm emissions, land-use change, transport and processing (Vermeulen et al., 2012). At the same time, protection and restoration of many different types of ecosystem holds huge carbon sequestration potential which will be essential to meet net zero targets. However, because of the lack of comprehensive global data sets, tracking investment in adaptation and mitigation measures related to agriculture, forestry and other land uses is difficult.

187. According to CPI estimates, average annual public investment in mitigation or measures with both a mitigation and adaptation benefit related to agriculture, forestry and other land uses, as well as natural resource management, stood at USD 19 billion and USD 16 billion for 2017 and 2018, respectively (CPI, 2020a). However, no estimates for private investments in sustainable agriculture, forestry and other land uses were available.

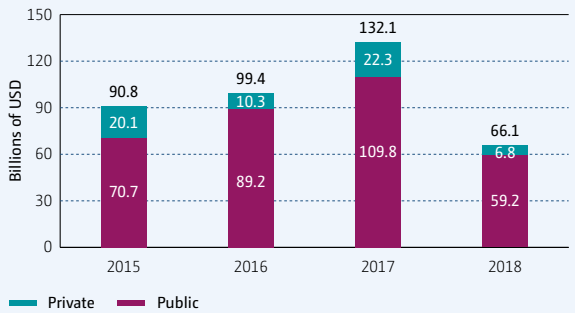
188. According to OECD, biodiversity finance (i.e. expenditure that contributes – or intends to contribute – to the conservation, sustainable use and restoration of biodiversity), is estimated at between USD 78 and 91 billion per year (2015–2017 average). This comprises public domestic expenditure (USD 67.8 billion per year), international public expenditure (USD 3.9–9.3 billion per year) and private expenditure (USD 6.6–13.6 billion per year) on biodiversity. However, government spending on support activities potentially harmful to biodiversity are circa USD 500 billion per year, more than five to six times the total spending for biodiversity (OECD, 2020f).

189. A few other estimates from the report include economic instruments like biodiversity-relevant taxes (USD 7.7 billion in revenue per year, 2016-2018 averages) and biodiversity-relevant fees and charges (USD 1.2 billion in revenue per year, 2015-2017 average); labelled green bonds to finance projects related to sustainable land use (USD 4–5 billion in 2018); impact investing from Global Impact Investing Network's Impact Investor Survey (USD 9.5 billion or 4 per cent of the AUMs) related to forestry; blended finance structure estimates from Convergence related to biodiversity (USD 3.1 billion from 2000 to 2018). However, due to different time periods captured by the data, lack of knowledge on their exact climate impacts and comprehensive coverage across countries, these have been excluded from the overall estimates.

190. Other estimates of finance in sustainable agriculture, forestry and other land uses do not offer global breakdowns of finance flows to these sectors, nor clarify how the flows are consistent with a low GHG emissions and climate-resilient development pathway. 'Forests and Finance', an initiative by several campaign and research organizations, provides an assessment of over 300 companies directly involved in the beef, soy, palm oil, pulp and paper, rubber and tropical timber (forest-risk sector) supply chains, whose operations may lead to deforestation in South East Asia, Central and West Africa, and Brazil. According to their database, investments of USD 39.2 billion and USD 48.3 billion in 2017 and 2018, respectively, were made in this "forest-risk sector" in the form of loans and underwriting facilities (Forests and Finance, 2021).

Figure 2.6

Estimates of global investment in other transport-related investments, 2015–2018 (billions of USD)



Source: CPI (2020a); These numbers are updated to include additional data from IJ Global and Convergence.

2.2.6 Estimates of investment in climate change adaptation and resilience

191. Despite the critical importance of adaptation finance tracking, significant data and reporting challenges limit the ability to capture global adaptation finance flows. This is mainly because regional or local vulnerabilities determine whether an investment has adaptation and resilience outcomes (AfDB et al, 2018). For example, an investment in drought-resistant crops in a region with high drought vulnerability would have a significantly different impact than the same investment in a low vulnerability region. Also, lack of impact metrics and reporting requirements, along with data confidentiality, limits adaptation investment tracking for both private and public actors. Some private reporting is encouraged though optional via CDP, SASB, TCFD, and GRI responses, but this reporting is not regulated and, thus, companies and financial institutions are not incentivized to report as rigorously as in regulatory financial filings.

192. Based on CDP's Climate Change questionnaire responses, 139 companies receiving an "A" rating for their response identified USD 13.9 billion in costs associated with managing physical climate-related risks in 2018. This value does not reflect the companies' annual investment in climate change, as CDP respondents have significant leeway to report anticipated costs over a time frame of their choosing, which makes it difficult to track investments made in a specific year . The reporting does represent a first step in identifying the scale of investment by private sector leaders in climate change and, as companies continue to report climate-related risks and mitigation strategies, their ability to track and report on adaptation finance will improve.

193. USD 30 billion on average was invested from public sources in 2017 and 2018. The MDBs collectively channelled co-finance adaptation investment of USD 9.6 billion and USD 7.5 billion in 2017 and 2018, respectively, compared to USD 3.7 billion in 2016. This co-finance includes the amount of financial resources contributed by other investors alongside MDB climate finance and includes entities from both the private (commercial) and public (non-commercial) sectors. Although details of the specific providers are not available, private sector co-financing of MDB adaptation projects is estimated to be negligible (AfDB et al. 2019).

2.3 Domestic public climate finance

194. National and subnational governments are an important source of public finance investments to meet the national climate targets and commitments under the Paris Agreement and support transition to a low-carbon, climate-resilient future. The majority of public spending (55 per cent) and investment (64 per cent) on climate and the environment was by subnational governments in 30 OECD countries between 2000 and 2016 (OECD/UCLG, 2019). However, subnational climate-related spending and investment only represented 1.3 per cent and 0.4 per cent of GDP on average, respectively.

195. A better understanding of domestic government expenditure – including national and subnational budgets, domestic public procurement or infrastructure investment and government shares in State-owned enterprises' investments – can help to identify financial gaps, align national policies and governance mechanisms with the global climate goals policies, and improve accountability among donors and Parties to the Paris Agreement. More countries, including developing countries, are implementing climate budget tagging or national investment landscapes to support tracking of climate expenditure (see section 1.2.3). However, different methodologies and approaches, as well as reporting on actual expenditure spent, are lacking. Inconsistent definitions and criteria to define climate finance including adaptation, limited technical and institutional capacity, lack of unified and systematized information, and the limited access to national climate scenarios and projections are some of the factors that hinder a full accounting of public budgets dedicated to domestic climate action.

196. Several developing countries provided information on domestic expenditure or co-financing of projects in their BURs, amounting to USD 4.9 billion annually in the 2017–2018 period (see annex F).

197. Over the past several years more than 30 countries have applied the UNDP's CPEIRs methodology to develop climate budget tagging systems for tracking climate finance expenditures. Eight developing countries reported spending USD 11.7 billion on climate finance in 2017 in their published CPEIRs, while only one developing country reported USD 1.3 billion in 2018. Domestic climate finance expenditure for two developed countries is estimated at an average USD 51.5 billion annually for 2017 and 2018. In total, these estimates on domestic public expenditures on climate change in 2017–2018 amount to approximately USD 86.6 billion (annex K).

Box 2.3

Identification of emerging data sources to track climate finance spending by cities

Available data for city finance continued to remain limited and not necessarily within the scope of climate finance. CDP, through its 'City-wide Emission Reduction Actions for 2019' database, provides total cost and contributions from local government to emission reduction projects. Similarly, CDP provides project-level data for Cities Adaptation Actions for 2019 and provides estimates on a variety of adaptation sectors, such as flood mapping, disease prevention measures, and resilience measures for buildings, to name a few. Per the CDP cities data, in almost all regions, extreme hot temperature and flood and sea level rise were the most common climate hazards reported by cities. Project-reported cost value by climate hazard varied significantly, with projects addressing storm and wind hazards as the highest total cost – USD 21 billion – and extreme precipitation next at USD 13 billion in 2018. However, the data are not comprehensive as some submissions provide data for the total cost of projects and not for the sum provided by the local government, and vice versa, and not included in the overall global estimates.

The SNGWOFI, co-led by the OECD and UCLG, provides data on subnational-level spending using a classification for expenditure in environmental protection. These include spending on waste collection and treatment, sewerage, parks and green areas, air pollution, noise, soil protection and nature preservation. While no investment numbers were provided, the report estimates that spending on environmental protection accounts for only 0.3 per cent of GDP or 5.0 per cent of overall subnational expenditure in 67 countries.

Using the OECD DAC data, climate-related bilateral and multilateral development finance provided to developing countries for projects categorized as "urban development" has stagnated between USD 1.4 to 1.6 billion in 2014–2018. These projects render benefits across several sectors and range from urban governance to urban infrastructure, to water and wastewater management. Around 65 per cent and 25 per cent of these investments are by MDBs and DAC members, respectively. These numbers are likely to be underreported as projects can be categorized into a specific sector (like water, transport, etc.) despite falling within the physical boundaries of an urban area or are designed to meet the needs of city dwellers.

Furthermore, there is no commonly accepted definition for a number of key concepts: the definition of what constitutes a "city" or "urban" differs from country to country, as well as the definition of "urban climate finance". The latter is especially a problem of the demarcation of the urban component, of whether one considers projects that are: a) situated within the geographic boundary of the city, b) designed to serve municipal-level objectives, c) financed or under the responsibility of the city government, or a mix of the three (CCFLA, 2015).

Estimates from the Cities Climate Finance Leadership Alliance report (CCFLA et al., 2021a) suggest that urban climate finance averaged USD 384 billion in 2017–18. Out of this, USD 75 billion was tracked at project level while USD 308 billion was estimated through a top-down capital expenditure approach in key urban sectors. The majority of the estimated finance was in sustainable transport (USD 202 billion) followed by green building infrastructure and energy efficiency (USD 167 billion). Out of the total, USD 136 billion was from private sources, while public actors committed USD 84 billion, and USD 163 billion was from unknown sources. The regions of East Asia and the Pacific, and Western Europe received the highest amount of urban climate finance, with USD 187 billion and USD 85 billion, respectively. These estimates are derived mainly using the same data sources as the one used to arrive global estimates (section 2.2), and therefore excluded to avoid any double counting.

According to the Atlantic Council-CCFLA and Rockefeller report, up to USD 3.7 billion was invested annually in urban adaptation projects in 2017–18 (CCFLA et al., 2021b). Urban adaptation, defined as resources directed to activities aiming to address climate-related risks faced by cities contributing to urban resilience, represents approximately 3–5 per cent of total adaptation finance flows and the water and wastewater sectors. Furthermore, as per the CDP cities data, in almost all regions, extreme hot temperature and flood and sea level rise were the most common climate hazards reported by cities. Project-reported cost value by climate hazard varied significantly, with projects addressing storm and wind hazards at the highest total cost – USD 21 billion – and extreme precipitation next at USD 13 billion in 2018.

The Government of Nepal (GoN, 2018) conducted a d-CPEIR[47] in 2016–2017 for its 5 districts to understand management of climate finance at the subnational level in Nepal. If adopted widely, these studies can establish a baseline of climate financing (including budget, expenditure and trend) at the subnational level to assess how local institutions and policy respond to the diverse climatic situations.

47) Available at https://www.climatefinance-developmenteffectiveness.org/sites/default/files/dCPEIR-English-Report.pdf.

2.4 South–South cooperation on climate finance

198. There is limited information on climate finance flows among non-Annex I Parties. The reporting of such data is voluntary under the UNFCCC, while only a few countries, such as the Republic of Korea and the United Arab Emirates, report on their development assistance to the OECD CRS.

199. IDFC member institutions in non-OECD countries committed USD 4 billion and USD 3.4 billion to "green energy and mitigation of GHG emissions" projects in other non-OECD countries in 2017 and 2018, respectively. Financial flows among non-OECD based institutions for climate change adaptation amounted to USD 1.8 billion in 2017 and USD 0.7 billion in 2018.

200. Further, several developing countries are shareholders of MDBs. Around 16–31 per cent of the climate finance provided by MDBs can be attributed to non-Annex II Parties, which amounts to USD 4.2–6.7 billion for 2017 and USD 5.2–8.9 billion for 2018.

201. The BRICS-led New Development Bank (NDB) and China-led AIIB provided USD 1.4 and USD 1.9 billion for renewable energy projects in 2017 and 2018, respectively. Developing countries' ownership in AIIB, based on "paid-in capital" contributed by member countries is estimated at 69 per cent, while NDB is fully owned by developing countries.

202. The GCF received pledges amounting to USD 112 million from developing countries in its initial funding, all of which had been disbursed by the end of 2019. Further, the GCF's first replenishment has raised USD 9.9 billion in pledges for the period between 2020 and 2023 (as at July 2020). This includes contributions of USD 105 million from nine developing countries (Chile, Colombia, Indonesia, Mexico, Mongolia, Panama, Peru, Republic of Korea, and Viet Nam) with the Republic of Korea providing the greatest contribution (USD 100 million).

203. According to CPI estimates USD 3.5 billion and USD 2.9 billion were invested in the renewable energy and transport sectors by private actors from non-Annex I countries in other non-Annex I countries in 2018 and 2017, respectively. The increase of almost three times from the 2016 level of USD 1.1 billion was attributed to increased investment in East Asia and the Pacific, the Middle East and North Africa, and South Asia in sustainable transport and renewable energy projects.

2.5 Climate finance flows from developed to developing countries

204. This section reviews data on climate finance flows (both public and private) from developed to developing countries over the period 2017–2018. Data on the flows of public climate finance are of higher quality and consistency than data on private climate finance flows.

Table 2.4

Estimated South–South climate finance flows, 2015–2018 (billions of USD)

	2015	2016	2017	2018
Bilateral flows				
Republic of Korea and United Arab Emirates (data from OECD to ODA eligible countries)	0.5	0.3	0.3	0.2
Republic of Korea (BUR3) – bilateral, regional and other channels	0.3	0.2	0.2	
Republic of Korea (BUR3) – multilateral channels		0.1	0.1	
IDFC member institutions (to non-OECD member countries)	8.2	5.8	5.9	4.1
Multilateral flows				
GCF-disbursed flows from non-Annex I Parties[a]		0.01	–	–
MDB financing by non-Annex II Parties[b]	3.1-4.7	3.5-5.9	7.4–8.0	10.2–10.4
NDB		0.6	0.3	0.6
Private flows (CPI) to renewable energy and sustainable transport projects (non-Annex I)	2.6	1.1	3.5	2.9
Total	**14.4–16.0**	**11.3–13.7**	**17.8–18.0**	**18.0–18.2**

a. The contribution from the Republic of Korea has been excluded from the GCF-disbursed flows to avoid double counting with OECD data.

b. This includes financing from AfDB, ADB, AIIB, EBRD, EIB, IDBG and WBG.

However, it is important to note that several databases are used to illustrate flows from developed to developing countries, without prejudice to the meaning of those terms in the context of the Convention and the Paris Agreement, including but not limited to Parties included in Annex II/Annex I to the Convention to Parties not included in Annex I to the Convention and MDBs; OECD members to non-OECD members; OECD DAC members to countries eligible for OECD DAC official development assistance; and other relevant classifications from various sources.

205. International public climate finance is routinely reported through bilateral channels (government agencies and DFIs) or multilateral channels (multilateral climate funds and MDBs). Private finance flows are often confidential in nature, consisting of flows from either multinational banks or international investors. Such data are often reported in the form of FDI statistics, but these rarely have the level of granularity required to understand whether the financing is related to climate change mitigation or adaptation activities.

206. The available data on bilateral and multilateral flows are first discussed separately. This is followed by a consideration of the perspective of the recipients of public climate finance. Available estimates of private finance flows from developed to developing countries are then presented. A summary of all flows from developed to developing countries is provided at the end of the section. As there is no mandate to assess the USD 100 billion climate finance commitment by 2020, the BA does not report on progress towards this goal.

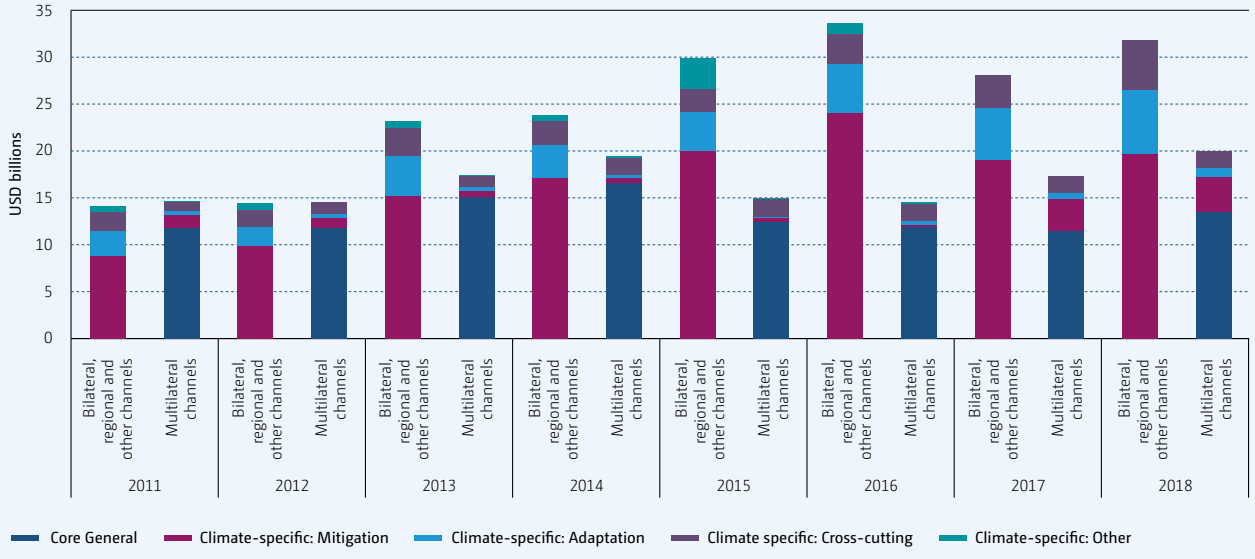
2.5.1 Bilateral provider flows from developed to developing countries

207. Total public financial support reported by 23 Annex II Parties in their BRs submitted (as at December 2020) amounted to USD 45.4 billion in 2017 and USD 51.8 billion in 2018 (Table 2.5). Seventy-four per cent of the financial support is climate-specific, mostly through bilateral, regional and other channels. Climate-specific financial support provided increased by 13 per cent on a comparable basis[48] from the 2015–2016 period.

208. Mitigation finance is the largest share of climate-specific financial support through bilateral channels at 65 per cent. However, adaptation finance has increased its share from 15 per cent from the 2015–2016 period to 21 per cent as it grew at a higher rate than mitigation finance (50 per cent growth compared to 7 per cent growth for mitigation finance). Support for cross-cutting projects with both mitigation and adaptation benefits covers the remaining 15 per cent. Core general contributions to multilateral institutions that Annex II Parties are unable to confirm as climate-specific account for the remainder of the total, averaging USD 12.5 billion over 2017–2018 (figure 2.7).

Figure 2.7

Financial support provided as reported by Annex II Parties, 2011–2018



48) "On a comparable basis" compares the same 23 Annex II Parties in both periods.

Table 2.5

Climate-specific finance and core general funding provided by Annex II Parties to developing countries, 2011–2018, as reported in their BRs (billions of USD)

	2011	2012	2013	2014	2015	2016	2017	2018
Bilateral, regional and other channels								
Mitigation	8.79	9.91	15.17	17.08	19.98	24.06	18.99	19.64
Adaptation	2.64	2.00	4.25	3.55	4.16	5.15	5.57	6.81
Cross-cutting	2.00	1.79	3.02	2.50	2.44	3.27	3.52	5.34
Other	0.65	0.68	0.71	0.74	3.34	1.08	-	-
Total climate-specific	14.08	14.38	23.15	23.87	29.92	33.56	28.09	31.79
Multilateral								
Mitigation	1.33	0.99	0.58	0.45	0.38	0.21	3.38[c]	3.78[c]
Adaptation	0.44	0.44	0.43	0.29	0.19	0.41	0.68	0.87
Cross-cutting	0.96	1.22	1.20	1.88	1.84	1.78	1.81	1.90
Other	0.17	0.05	0.06	0.12	0.19	0.19	-	0.00
Total climate-specific	2.90	2.70	2.27	2.74	3.06	3.96	5.88	6.56
Total climate-specific finance[a]	**16.98**	**17.08**	**25.42**	**26.6**	**32.98**	**37.52**	**33.96**	**38.35**
Core general[b]	11.78	11.83	15.11	16.63	12.42	11.91	11.47	13.44
Grand total	**28.76**	**28.92**	**40.52**	**43.24**	**45.39**	**49.43**	**45.43**	**51.80**

Note: Data accessed in December 2020. Information for 2017–2018 captures data from the 23 Annex II Parties that had submitted their BR4s by December 2020, and information from the 24 Annex II Parties for the period 2011–2016. [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. [c] In its BR4, the EU reported climate-specific finance related to the EIB under multilateral channels and in its BR1–3 under bilateral, regional and other channels.

Source: Annex II Party BRs for 2017 and 2018 as compiled in annex H. BA 2014, 2016 and 2018 for the years 2011–2016.

209. Table 2.6 shows the total bilateral assistance reported by OECD DAC members for climate change mitigation and adaptation projects. Bilateral assistance provided by OECD DAC members for projects with climate action as a principal objective decreased by 6 per cent over 2017–2018 compared to 2015–2016, while projects with climate action as a significant objective increased by 16 per cent.

210. Of the 30[49] members of OECD DAC, 28 also reported data on climate finance through their BRs submitted in 2017 and 2018. When reporting to the UNFCCC on climate finance in their BRs, OECD DAC members draw on their climate-related development finance reporting to the OECD DAC but adjust the amounts reported to better reflect the financial contribution of the respective activities to the objectives of the Convention (see section 1.2.1) (OECD, 2020d).

211. The IDFC is a network of 26 national and regional development banks from both developed and developing countries. According to IDFC, bilateral climate finance

49) In addition to Annex II Parties, Czechia, Hungary, Poland and Slovakia are DAC members that report on climate finance provided in their BR. The Republic of Korea is a DAC member that reports on climate finance provided in its BUR.

Table 2.6

Bilateral assistance reported by OECD DAC members for climate change mitigation- and adaptation-related projects, 2011–2018 (billions of USD)

	2011	2012	2013	2014	2015	2016	2017	2018
Mitigation								
Principal	7.27	9.07	9.89	11.42	9.42	8.83	9.28	8.15
Significant	4.39	4.67	5.09	5.26	10.77	13.94	12.31	17.11
Adaptation								
Principal	1.90	2.54	3.19	3.43	3.49	4.33	5.56	4.10
Significant	5.50	6.65	6.76	7.46	11.75	10.40	13.52	13.11
*Overlap**								
Principal	1.19	1.72	1.52	1.81	1.85	2.52	3.51	3.07
Significant	2.11	2.16	2.33	2.93	4.30	3.75	5.09	5.96
Total								
Principal	7.98	9.90	11.57	13.04	11.06	10.64	11.33	9.17
Significant	7.78	9.16	9.52	9.78	18.22	20.59	20.74	24.26
Principal + Significant	**15.76**	**19.06**	**21.09**	**22.82**	**29.28**	**31.23**	**32.07**	**33.43**

Note: (1) Adaptation projects were not tracked before 2010; (2) *Many activities target multiple climate objectives, so the total nets out this overlap to ensure there is no double counting or triple counting in the data; (3) No attempt is made to estimate the climate-related share of the project budget by applying country-level coefficients.

Source: Authors' analysis based on OECD DAC CRS statistics, accessed 20 March 2019.

flows from OECD-based institutions to projects in non-OECD countries averaged USD 20 billion in 2017 and 2018, compared to USD 16 billion in 2015 and 2016 (IDFC, 2019). No data are available on the share of concessional and non-concessional finance within these flows.

212. In its report on aggregating climate finance provided and mobilized by developed countries, the OECD used data from BRs and OECD DAC to estimate bilateral public climate finance flows to developing countries of USD 27 billion in 2017 and USD 32.7 billion in 2018 (OECD, 2020a). This represents a rise of 11 per cent from the 2015–2016 period. Sixty per cent of the bilateral public climate was provided through loans during the 2016–2018 period, of which most were concessional (72 per cent).

2.5.2 Multilateral provider flows from developed to developing countries

213. Multilateral flows include flows reported by the dedicated climate funds administered by the operating entities of the Financial Mechanism of the Convention and the Kyoto Protocol, other multilateral climate funds and MDBs.

214. The GCF, which became fully operational in 2015, conducted its first replenishment in 2019 which raised USD 9.8 billion at the high-level pledging conference in October 2019, and the GCF will continue to mobilize resources during the first replenishment period. The GEF has been an operating entity of the Convention since 1996 and also manages the LDCF and the SCCF which have together raised USD 4.8 billion in replenishments. The AF has managed to raise USD 957 million in capital. Together, the UNFCCC funds committed USD 1.6 billion

in 2017 and USD 2.4 billion in 2018, primarily due to the higher level of funding from the GCF.

215. Other multilateral climate funds include those operating under the CIF. The CIF is administered by the World Bank and is made up of two funds, namely the Clean Technology Fund and the Strategic Climate Fund. The latter serves as an overarching framework for three programmes: PPCR, FIP and SREP.

216. Table 2.7 provides an overview of the commitments approved by multilateral climate funds, which are categorized thematically as "adaptation funds", "REDD+ funds", "mitigation funds" and "multiple-objective funds"; the last category refers to funds supporting both mitigation and adaptation. As a group, multilateral climate funds, including the UNFCCC funds, committed USD 2.2 billion in 2017 and USD 3.1 billion in 2018. These amounts are higher than the average amounts committed in 2015 and 2016 with an average increase of 39 per cent, primarily due to significant increases in commitments from the GCF and the GEF. The GCF provides no thematic allocation of its pledges except that it aims to deliver a 50:50 balance between mitigation and adaptation allocations in its portfolio and the thematic split of commitments is based on the type of projects funded by the GCF.

217. In its report on aggregating climate finance provided and mobilized by developed countries, the OECD attributes outflows from multilateral climate funds to developed countries based on their share of total contributions. In addition to the funds listed in table 2.2, the IFAD and the Nordic Development Fund are included in the analysis. The shares for individual funds range from 74 per cent for IFAD to 99.6 per cent for the GCF and 100 per cent for the AF. This results in USD 2.9 billion derived from total multilateral climate fund outflows in 2017, and USD 3.5 billion in 2018 attributed to developed countries.

218. MDBs play a key role in channelling climate finance to developing countries. In addition to managing specific climate funds on behalf of provider countries, and receiving core capital contributions, MDBs also raise capital through the capital markets (such capital constitutes what is referred to as their own resources). The first two activities are reflected in table 2.7 above, which shows data on the finance inflows from Annex II Parties managed by multilateral funds, as well as on their and core general and non-climate specific contributions to MDBs. Table 2.8 provides an overview of the climate finance outflows provided by MDBs to developing countries from their own resources.

219. A group of six MDBs – AfDB, ADB, EBRD, EIB, IDBG and WBG (including IFC) – have been reporting jointly since 2011 on their financing that supports climate change mitigation and adaptation projects. According to their joint annual reports, the six MDBs committed, from their own account and from external resources, a total of USD 35 billion and USD 43 billion in 2017 and 2018 in climate finance in developing and emerging economies (AfDB et al 2018, 2019). Adaptation finance in 2018 more than doubled to USD 12 billion compared to USD 6 billion in 2016. The shares of adaptation and mitigation finance have averaged around 22 per cent and 78 per cent, respectively, of their total commitments over the last five years. New MDBs – AIIB and NDB – together provided USD 1.4 and USD 1.9 billion for renewable energy projects in 2017 and 2018, respectively (more in section 2.4).

220. A variety of approaches may be used to estimate the attribution of MDBs' climate finance to developed countries, with some resulting in a 76 per cent aggregate share and others up to a 90 per cent aggregate share (OECD, 2019a, please refer to section 1.2.4 for more information). In this BA, two approaches are used to estimate commitments from Annex II Parties to non-Annex I Parties via MDBs: (1) based on the ownership shares held by developed countries in each MDB (CPI, 2019a), resulting in an aggregate share of 77 per cent and 76 per cent of the total climate finance outflows from MDBs to developing countries in 2017–2018 attributed to Annex II Parties, and (2) based on paid-in capital (historical and most recent contributions) and, for institutions raising additional funds from the capital markets, further considerations of on-call capital, which shareholders have committed to provide in exceptional circumstances (OECD, 2020a) with 75 per cent and 72 per cent of finance to developing countries attributed to "developed countries" (Annex II Parties and all EU member States, Lichtenstein and Monaco) in 2017 and 2018.

221. In its report on aggregating climate finance provided and mobilized by developed countries, the OECD uses activity-level data reported to the OECD CRS by MDBs with institution-specific attribution percentages, including their separate concessional and non-concessional windows. Individual attribution percentages calculated by the OECD range from 5.1 per cent for the CAF to close to 100 per cent for the European Investment Bank (EIB) in 2018 (see annex E). MDB climate finance attributable to developed countries stood at USD 24.1 billion and USD 25.8 billion in 2017 and 2018, respectively, compared to USD 15.7 billion in

Table 2.7

Overview of commitments to projects approved during 2015–2018 by multilateral climate funds (millions of USD)

	Pledged through 2018 FY	Commitments during 2015 FY	Commitments during 2016 FY	Commitments during 2017 FY	Commitments during 2018 FY
Adaptation funds	**4,323.9**	**544.5**	**504.1**	**569.1**	**422.7**
Adaptation for Smallholder Agriculture Program	381.7	84.0	35.0	2.2	-
Adaptation Fund[a]	956.6	59.6	32.3	84.8	69.2
Least Developed Countries Fund[a]	**1,463.5**	100.1	74.2	157.3	72.6
Pilot Program for Climate Resilience[b]	1,144.8	172.3	10.4	31.6	24.2
Special Climate Change Fund[a]	**377.4**	10.1	7.6	1.0	1.1
Green Climate Fund – adaptation commitments		118.3	344.5	292.2	255.7
REDD-plus funds	**2,727.6**	**108.5**	**244.5**	**254.5**	**361.7**
Forest Carbon Partnership Facility – Readiness Fund	449.9	65.8	-	-	-
Forest Carbon Partnership Facility – Carbon Fund	878.3	-	-	-	-
Forest Investment Program[b]	725.6	11.0	48.8	88.7	61.6
UN-REDD Programme	318.6	5.4	32.2	4.3	4.1
Biocarbon Fund	355.2	20.0	-	12.0	50.8
Green Climate Fund[a] – REDD-plus commitments		6.2	163.5	150	245
Mitigation funds	**9,203.2**	**783.0**	**1561.6**	**1244.2**	**1716.7**
Clean Technology Fund[b]	5,404.3	451.7	498.5	342.8	395.8
GEF Trust Fund 5th Replenishment[a]	1,152.4	-	-	-	-
GEF Trust Fund 6th Replenishment[a]	1,117.2	212.8	191.1	151.4	256.8
GEF Trust Fund 7th Replenishment[a]	654.2				
Scaling Up Renewable Energy Program in Low Income Countries[b]	744.4	76.3	73.5	184.8	89.5
Partnership for Market Readiness	130.7	-	0.4	9.5	3.0
Green Climate Fund[a] – mitigation commitments		42.3	798.2	556	971.6
Multiple-objective funds	**1,332.9**	**11.8**	**59.9**	**162.9**	**573.9**
Global Climate Change Alliance	1,332.9	-	51.4	-	-
Green Climate Fund – readiness support		11.8	8.5	163	574
Green Climate Fund – Initial Resource Mobilisation	9,658.8				
Total	**27,246.4**	**1,447.6**	**2,370.0**	**2,230.7**	**3,075.0**

Source: CFU, 2020; GCF.

Notes: Amounts may not sum to the total because of rounding.

Abbreviations: Pledged = contributor pledges, FY = the fund's fiscal year ending during the specified calendar year.

a. Denotes a fund under the UNFCCC.

b. Denotes a fund that is part of the CIF.

2016 (OECD, 2020a). Of total climate finance outflows through multilateral channels, the share of mitigation and adaptation stood at 69 per cent (or USD 19.0 billion) and 27 per cent (USD 7.4 billion) in 2017, respectively, with the remaining amount allocated to cross-cutting activities. Around 88 per cent of the financing was in the form of loans, out of which 70 per cent was non-concessional, followed by grants (10 per cent) and equity (2 per cent). Asia received the largest share of multilateral climate finance with 35 per cent followed by Africa (30 per cent) and Latin America (19 per cent).

222. The BA authors applied the two aforementioned approaches separately to obtain the estimates presented in table 2.8 below. The remainder of the climate finance committed to non-Annex I Parties by MDBs is treated as South–South climate finance.

2.5.3 Recipients of climate finance

223. Understanding which entities receive climate finance from public sources can shed light on the extent to which public funding might mobilize capital in the

Table 2.8

Climate finance commitments by MDBs from their own resources that are attributable to Annex II Parties, 2013–2018 (billions of USD)

	Approach based on ownership shares held by developed countries in each MDB					Approach based on share of paid-in capital and callable capital (mobilisation effect) of each MDB[f]		
	Total climate fiannce outflows reported by MDBs from own resources	Less commitments to Annex 1 Parties	Total climate finance outflows to non-Annex I Parties	MDB climate finance to non-Annex I Parties attributable to Annex II Parties	Share of total outflows	Total MDB outflows to developing countries reported to OECD DAC	MDB outflows to developing countries attributed to developed countries[g]	Share of total outflows
2013	20.8	-3.3[a]	17.5	11.9	65%	15.8	13.0	82%
2014	25.7	-6.3[b]	19.5	12.7	65%	22.0	18.0	82%
2015	23.4	-3.0[c]	20.4	15.7	77%	17.9	14.4	80%
2016	25.8	-2.6[d]	23.2	17.3	74%	20.4	15.7	77%
2017	34.1	-3.4[e]	30.7	23.3	76%	32.1	24.1	75%
2018	41.5	-3.1[e]	38.4	28.0	73%	36.0	25.8	72%

a. Commitments of MDB resources to EU 13 countries from table 2 of AfDB et al. (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 et al. (2015)).

c. Commitments of MDB resources to EU-11 countries instead of EU-13 countries were reported in 2015. EU-11 is composed of the EU-13 countries less Czechia and Malta. Figures 11 and 17 in AfDB et al. (2016) give the total adaptation and mitigation finance provided, from both their own and external resources, by MDBs to EU-11 countries (USD 3,217 million). In this BA, the percentage of own resources to total finance has been used to obtain the share of commitments to EU-11 countries made by MDBs from their own resources only.

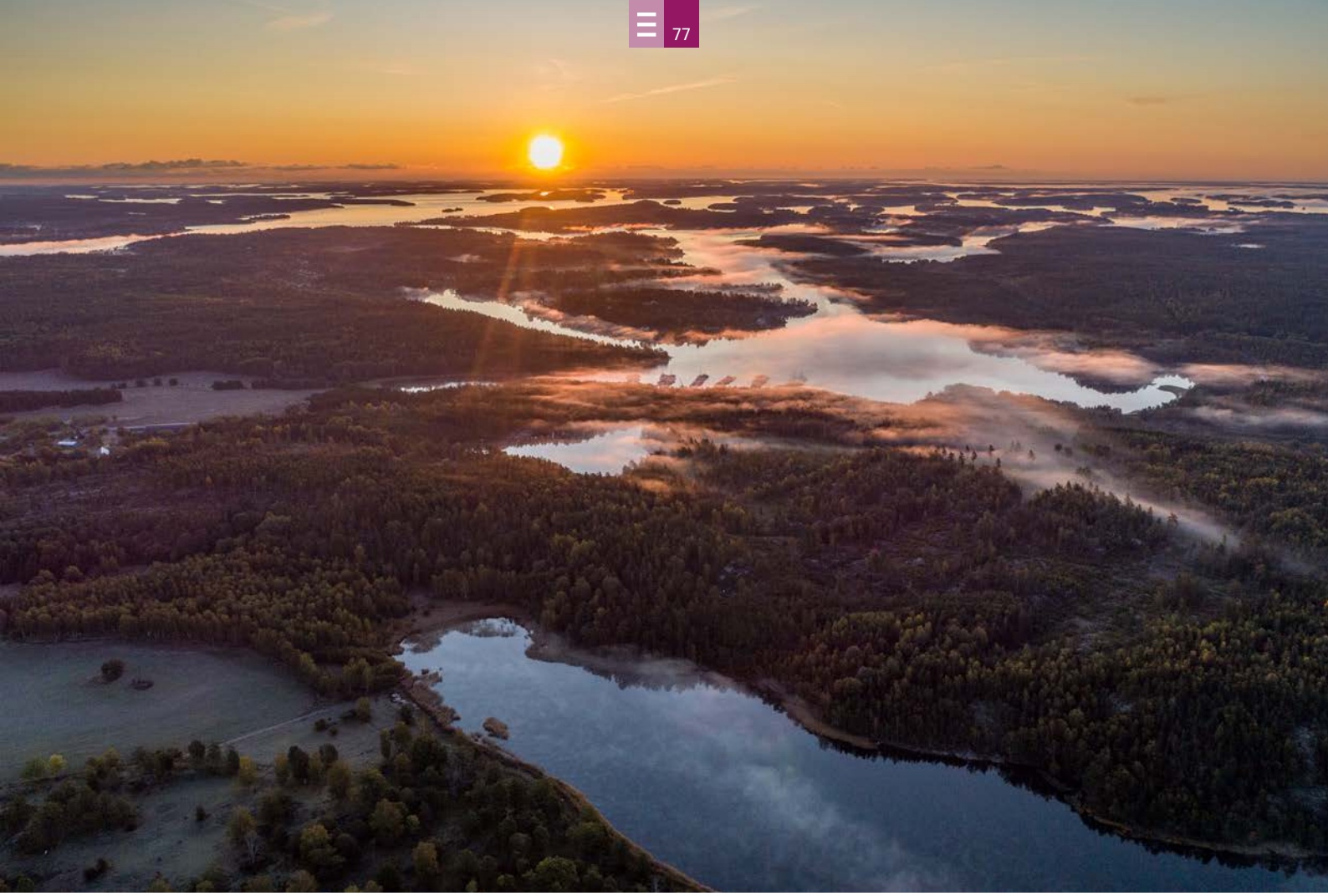
d. Commitments of MDB resources to EU-12 countries instead of EU-13 countries were reported in 2016. EU-12 is composed of the EU-13 countries excluding Czechia and Malta and including Greece. Figures 8 and 13 in AfDB et al. (2017) give the total adaptation and mitigation finance provided, from both their own and external resources, by MDBs to EU-12 countries (USD 2,859 million). In this BA, the percentage of own resources to total finance has been used to obtain the share of commitments to EU-12 countries made by MDBs from their own resources only.

e. Commitments of MDB resources to EU-12 countries. Figures 4 in AfDB et al (2018, 2019) give the total adaptation and mitigation finance provided, from both their own and external resources, by MDBs to EU-12 countries (USD 3,615 million and USD 3,362 million in 2017 and 2018, respectively). In this BA, the percentage of own resources to total finance has been used to obtain the share of commitments to EU-12 countries made by MDBs from their own resources only.

f. For paid-in capital contributions, both historical and recent contributions are taken into account. For institutions raising additional funds from the capital markets, callable capital, consisting of on-call capital which shareholders have committed to provide in exceptional circumstances, supports the ability to raise funds. For callable capital, only shareholders with credit ratings of A or above are taken into account and such capital is weighted at 10 per cent of total attribution compared to 90 per cent for paid-in capital.

g. For 2013–2016, developed countries are classified as Annex II Parties plus Czechia, Poland, Slovakia and Slovenia, and developing countries as non-Annex I Parties and/or the OECD DAC list of ODA-eligible recipients (see annex A). For 2017–2018, developed countries are classified as Annex II Parties, EU member States, Lichtenstein and Monaco, and developing countries as non-Annex I Parties and/or the DAC list of ODA recipients for 2018.

Source: AfDB et al, 2014, 2015a, 2016, 2017, 2018, 2019, OECD 2020a.



long term. It is important to consider the perspective of the recipients of international public climate finance when looking at the climate change mitigation and adaptation solutions being deployed in developing countries. The bilateral and multilateral finance flows discussed above are channelled through a wide range of public and private recipient entities. Many of these recipients are intermediaries, such as banks, and channel the finance to end users. However, there is a lack of detail on the recipient entities of climate finance in data on climate-related spending. For instance, recipient type could not be identified for 59 per cent of publicly sourced climate finance due to data limitations (CPI, 2019a).

224. The growth in BUR submissions from non-Annex I Parties has resulted in a greater amount of information on finance received than in previous BAs. Time lags in data availability for reporting, however, make it difficult to provide updated or complete information on finance received in 2017 and 2018. Of the 63 Parties that have submitted BURs, 28 included some information on climate finance received in 2017 or 2018. USD 7.8 billion was reported as received for projects starting in 2017 and USD 2 billion for projects starting in 2018. Another five Parties reported information on USD 1.9 billion of finance received over 3–7-year time frames that included 2017 or 2018 but did not indicate the annual breakdown. See annex F for further information.

225. OECD climate-related development finance data provides information on the primary channel of delivery of bilateral assistance like governments, private and non-governmental entities in recipient countries. Around 51 per cent of the bilateral climate-related assistance was channelled through national and local recipient governments in 2017 and 2018, while the remainder of the finance was channelled through international organizations and NGOs. 11 per cent of the bilateral assistance was channelled through donor governments, donor country-based NGOs and public entities and third country governments.

226. MDBs report on the nature of recipients or borrowers of MDB climate finance differentiating between public and private, with “public recipients” defined as organizations with more than 50 per cent public ownership. Of the total climate finance committed by MDBs from their own resources, 71–74 per cent was channelled to public sector recipients between 2015 and 2018. The majority of the adaptation finance (90–97 per cent) went to public sector entities between 2015 and 2018, while the corresponding estimate for mitigation was 65 per cent. MDB reporting on climate finance flows through the OECD DAC provides greater detail on the types of recipients.

2.5.4 Estimates of private finance flows from developed to developing countries

Private finance mobilized through public interventions and deployed via bilateral channels

227. As introduced in section 1.2.2, the OECD DAC has developed and implemented in its statistical directives instrument-specific methodologies to collect data on private finance mobilized. On that basis, bilateral and multilateral development finance providers include data on private finance they mobilize in their annual reporting to the OECD DAC. As part of its analyses and reports of climate finance provided and mobilized by developed countries, the OECD makes use of those data to include figures for private climate finance mobilized by developed countries. These figures were USD 14.6 billion in 2018 and USD 14.5 billion in 2017, compared to USD 10.1 billion in 2016 (OECD, 2020a). Multilateral institutions accounted for about 75 per cent of this total in both 2017 and 2018, with the remaining 25 per cent having been mobilized by bilateral providers. In comparison, both multilateral and bilateral sources mobilized about 50 per cent of the 2016 total. It is important to note that, in order to only account for private finance attributable to developed countries (see section 2.5.2 above), the OECD also applies the MDB attribution percentages to amounts of private finance mobilized by these institutions. During 2016–18, direct investments in companies and special purpose vehicles mobilized the most private finance (33 per cent of the total), followed by guarantees (31 per cent) and loan syndications (19 per cent). Credit lines, simple co-financing arrangements and investment in funds together accounted for the remaining 20 per cent.

228. IDFC members began tracking mobilized private climate finance in 2015. In 2018, eight institutions (out of 24 members) reported private finance mobilization of USD 61 billion, compared to USD 55 billion in 2017. In 2018, the majority of reported private finance mobilized was for mitigation, amounting to USD 58 billion. Other environmental objectives received $2 billion in co-financing; projects with dual mitigation and adaptation benefits received $800 million, while adaptation projects received only $140 million. Loans remain the main instrument for lending in three main categories of mitigation (95 per cent), adaptation (92 per cent), and other environment (89 per cent). However, for dual benefits projects, credit lines mobilized the most finance (69 per cent) and grants played the largest role for projects with other environmental objectives, accounting for 7 per cent of private finance mobilized. Because IDFC does not report on the source and destination of mobilized private finance, it is, however, not possible to separate the finance flows from developed to developing countries.

Private finance mobilized through public interventions and deployed via multilateral channels

229. Multilateral climate funds are mandated to play a role in mobilizing financial flows managed by the private sector to low-emission and climate-resilient investments in developing countries. However, the level of private sector engagement of such funds and specific mandates can vary across climate funds. Furthermore, lack of any harmonized methodology for estimating mobilized finance and limited systematic reporting translates into very limited information on the private finance mobilized by these funds. The GCF's 'Private Sector Facility' has approved 25 private sector projects with GCF funding of USD 2.2 billion mobilizing an additional USD 7 billion in co-financing as at October 2019 (GCF, 2019). The Clean Technology Fund reported project-level private co-financing totalling USD 502 million in 2017 (CTF, 2017). Cumulative private sector co-financing reported by the Forest Investment Program stood at USD 80 million in 2017 (FIP, 2017); the PPCR at USD 87 million in both 2017 and 2018 (PPCR, 2017). Cumulative private sector co-financing mobilized by SREP increased from USD 339 million in 2017 to USD 613.5 million in 2018 (SREP 2017, 2019).

230. Under the MDB approach, the total private co-financing figures are broken down further into two key elements, namely private direct mobilization and private indirect mobilization.

231. According to UNCTAD, the value of greenfield projects in renewable electricity continues to increase in the past decade with announced capital expenditures in renewable electricity totalling USD 78 billion in 2018. Private finance flows from developed to developing countries were USD 5.3 billion in 2017 and USD 11 billion in 2018 (CPI, 2020a). The increase in 2018 was due to a rise in renewable energy and low-carbon transport projects in the emerging markets in Latin America and the Caribbean, Central Asia and Eastern Europe, and sub-Saharan Africa.

232. Based on FDI Intelligence Data, Bhattacharya et al. (2019) estimate sustainable infrastructure FDI flows from G20 to markets and developing countries (EMDCs) at USD 282 billion between 2011 and 2017, which amounts to USD 40 billion a year. The study defines sustainable infrastructure to include investments in energy, water, transport, waste and natural infrastructure, screening investments based on the MDB-IDFC methodology, and

Table 2.8

Net flows of MDB climate co-financing by source, 2015–2018 (billions of USD)

	Description	2015	2016	2017	2018
Private direct mobilization	This refers to financing from a private entity on commercial terms, due to active and direct involvement of an MDB that leads to commitment of the private entity's finance. Private direct mobilisation does not include sponsor financing.		3.62	3.74	5.59
Private indirect mobilization	This refers to financing from a private entity supplied in connection with a specific activity for which an MDB is providing financing, where no MDB is playing an active or direct role that leads to the commitment of the private entity's finance. Private indirect mobilization includes sponsor financing, if the sponsor qualifies as a private entity.		12.04	18.06	22.6
Total private mobilization		**10.94**	**15.65**	**21.80**	**28.19**

Source: AfDB et al 2016, 2017, 2018, 2019.

adapted to account for the Paris Agreement. The energy sector accounts for the majority of these investments (92 per cent) with nine countries receiving 60 per cent of the total, while 78 countries received less than 1 per cent each, and many none at all.

2.5.5 Summary: Estimates of climate finance flows from developed to developing countries

Table 2.9

Summary of estimated climate finance flows from developed to developing countries, 2015–2018 (billions of USD)

	2015	2016	2017	2018	Geographical split		Notes
					Developed	Developing	
UNFCCC funds	0.6	1.6	1.5	2.4	NA	Non-Annex I Parties	
Bilateral							
Biennial Reports (bilateral, regional and other channels only)	29.9	33.6	28.1	31.8	Annex II Parties	Non-Annex I Parties	Changes to number of Parties reporting and methodological changes hinder comparisons across the years
OECD DAC climate-related development finance database	11.1–29.3	10.6–31.2	13.0–31.9	11.0–33.3	OECD DAC	List of ODA Recipients	
IDFC	16.5	16.9	21.5	24.0	OECD-based DFIs	Projects in Non-OECD countries	
Bilateral public climate finance provided (OECD 2020)	25.9	28.0	27.0	32.7	Annex II Parties, EU member-states, Lichtenstein and Monaco	List of ODA Recipients and/or non-Annex I Parties	Estimates exclude coal-related financing and export credits

Table 2.9 (continued)

Summary of estimated climate finance flows from developed to developing countries, 2015–2018 (billions of USD)

	2015	2016	2017	2018	Geographical split		Notes
					Developed	Developing	
Multilateral							
Multilateral climate funds (including UNFCCC funds)	1.4	2.4	2.2	3.1	NA	Developing countries	
MDB climate finance attributed to developed countries (own resources only)	17.4	19.7	24.1	25.8	Annex II Parties	Non-Annex I Parties	
BR (multilateral flows)	2.6	2.6	5.9	6.6	Annex II Parties	Non-Annex I Parties	
Total multilateral climate finance provided and mobilized (OECD 2020)	16.2	18.9	27.5	29.6	Annex II Parties, EU member-states, Lichtenstein and Monaco	List of ODA Recipients and/or non-Annex I Parties	Inflows considered for institutions only where data on outflows is unavailable
...Of which inflows into multilateral institutions	0.4	0.6	0.5	0.3			
Of which multilateral climate funds	1.4	2.6	2.9	3.5			
Of which MDBs	14.4	15.7	24.1	25.8			
MDB climate finance (own resources only)	23.4	25.5	33.0	40.2		Non-Annex I Parties	
Private finance							
Mobilized through bilateral channels							
Private climate finance mobilized through bilateral public interventions from developed countries (OECD 2020)	N/A	5.0	3.7	3.8	Annex II Parties, EU member-states, Lichtenstein and Monaco	List of ODA Recipients and/or non-Annex I Parties	
Mobilized through multilateral channels							
Private climate finance mobilized through multilateral public interventions attributed to developed countries	N/A	5.1	10.8	10.8	Annex II Parties, EU member-states, Lichtenstein and Monaco	List of ODA Recipients and/or non-Annex I Parties	This includes private finance mobilised by both multilateral climate fund and MDBs
Climate funds		0.2	0.6	0.1			
MDBs direct and indirect	10.9	15.7	21.8	28.2	Developed countries	Developing countries	
FDI							
Other private sector projects	2.4	1.5	5.3	11	OECD	Non-OECD	

Abbreviation: NA = "not applicable"

Note: Colours indicate data used for diagram. (1) The private mobilized finance in 2016 and 2017 are not directly comparable to previous years' estimates due to the implementation of enhanced measurement methodologies in 2015.

2.6 Available data sets that reflect integration of climate change considerations into insurance, lending and investment decision-making processes and that include information relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

233. As discussed in chapter I and chapter IV, numerous methodologies and approaches are being developed to help understand the contribution that public and private stakeholders can make toward achieving this goal, which specifically targets "making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development".

234. This section provides a non-exhaustive list of existing public and proprietary data sets capturing different responses of private capital owners and decision makers, to align their actions with Article 2.1c of the Paris Agreement. Data sets are listed by sources, specific asset classes or financial instrument, actors covered, description of data set, and example datapoints. Each data set is also categorized by flows, targets and integration depending on the nature of the relevant information. For instance, flows capture primary investments in productive assets and/or activities and capital markets allocation, that represents a shift in private capital to low-carbon and climate-resilient actions. Integration refers to investors and markets integrating climate considerations into decision-making processes, potentially resulting in future flows, and includes risk management policies, lending approval procedures, asset management mandates, stock listing and issuance requirements, and regulatory reporting and disclosure requirements. Targets include investors and markets signalling intent to respond, potentially resulting in future flows and refer to investor coalitions, public letters and statements, investment principles and pledges, and commitments by financial actors.

Table 2.10

Available data sets relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

Datasource	Asset Class	Actor Class	Description	Datapoints			Flows, Integration, Targets
BloombergNEF	Bonds, Loans	Banks, Corporations, Governments and its agencies (Municipalities, Sovereigns, Supranational), Project developers	Provides estimates of volumes of green or sustainability-linked loans.	USD billion	2017	2018	Flows
				Green bonds	168.6	175.6	
				Sustainability bonds	9.9	14.7	
				Social bonds	9.1	11.9	
				Sustainability-linked loans	4.3	46.2	
				Green loans	45.9	60	
				Sustainable Debt Issued	**237.8**	**308.4**	
Climate Bonds Initiative	Bonds	Banks, Corporations, Governments, Municipalities	Tracks issuances of green bonds.	USD billion	2017	2018	Flows
				Green bonds (at least 95% proceeds dedicated to green projects)	162.1	171.2	
				Labelled green bonds (incl. SDG, Social bonds etc,)	37.2	58.9	
				Total	**199.3**	**226.2**	

Table 2.10 (continued)

Available data sets relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

Datasource	Asset Class	Actor Class	Description	Datapoints			Flows, Integration, Targets
Frankfurt School/UNEP	Equity (Listed and private)	Renewable energy companies, Corporations	New public markets investment and venture capital and private equity flows in renewable energy.	USD billion	2017	2018	Flows
				Public market (initial public offering, private investment in public equity, convertibles and over the counter)	5.6	6.0	
				Venture Capital & Private Equity	1.5	2.0	
EMPEA	Private equity	Private equity fund managers, institutional investors	Private equity funds raised and disbursed in emerging markets Number of funds with climate sectors as investment priority by fund managers' survey	–			Flows
SwissRe Institute	Insurance and reinsurance	Insurance companies	Provides estimates of losses from natural and man-made catastrophes	Economic losses from natural and man-made disasters was estimated at USD 176 billion in 2018, out of which USD 93 billion was insured losses.			Flows
Aon – Weather, Climate & Catastrophe Insight Annual Report	Insurance and reinsurance	Insurance companies	Provides estimates of losses from natural disasters	Economic losses from natural disasters was estimated at USD 438 billion in 2017 and USD 225 billion in 2018. Out of this, insured losses were estimated at USD 147 billion in 2017 and USD 90 billion in 2018.			Flows
FinanceMap (2DII)	Listed funds	Asset managers	Provides insights into how the asset management sector is performing on climate change. Currently limited to secondary market activity	The portfolios held by the 15 largest asset management groups remain significantly misaligned with the targets of the Paris Agreement			Integration
Sustainable Stock Exchanges (SSE) Initiative	Listed equity	Stock exchanges	List of "partner exchanges" promoting sustainability in equity markets	34 out of 103 stock exchanges have sustainability bond listing processes in 2020; 24 exchanges have ESG reporting required as a listing rule			Integration
Boston Common – Banking on a Low-Carbon Future: Finance in a Time of Climate Crisis	Loans	Banks	Surveyed 58 banks to determine which are applying climate risk assessments in their risk assessment processes for loan approval.	49 per cent of the banks are implementing risk assessments or 2°C scenario analysis in 2018; 46 per cent have set explicit objectives/targets to increase or promote low-carbon products and services (Boston, 2018).			Integration, Targets
World Resource Institute (Green Targets Tool)	Loans	Banks	Surveyed 50 private sector banks on their sustainable finance commitments	Only 23 out of the 50 banks had a sustainable finance target (as of July 2019)			Targets
EY – Global Climate Risk Disclosure Barometer	Insurance, Banking	Insurance companies, Financial sector, non-financial sector	Provides information on disclosures of over 900 companies on climate-related financial risk disclosures	54 per cent of the companies assessed disclose climate change-related risks, but quality of the disclosures was relatively poor, with the average score being 27 per cent.			Integration

Table 2.10 (continued)

Available data sets relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

Datasource	Asset Class	Actor Class	Description	Datapoints	Flows, Integration, Targets
California Department of Insurance – Climate Risk Disclosure Survey Results	Insurance and reinsurance	Insurance companies	Surveyed insurance companies and title insurance on their emission reduction plans, risk assessment on climate-related risks,	Two-thirds of insurers have a climate change policy with respect to risk management and investment management in 2018 (CDI, 2017)	Integration
Asset Owners Disclosure Project (AODP)	Asset under management	Insurance companies, pension funds, sovereign wealth funds, foundations and endowments	Qualitative assessment of asset owners on their level of integration of climate change considerations into asset allocation or investment decision-making processes and disclosure.	34 per cent of surveyed insurers have integrated climate risk policy across asset portfolios and only about a fifth have set quantitative reduction targets (AOPD, 2017). Only 24 per cent of surveyed pension funds are quantifying and disclosing their level of investments in low-carbon solutions.	Integration
Principles for Responsible Investment: Climate Snapshot	Asset under management, Financial Services	Asset owners (Insurance, pension funds, sovereign wealth funds, foundations and endowments, reinsurance companies); Investment managers/funds	Survey responses from PRI signatories on TCFD alignment across the areas of governance, strategy, risk management, and metrics/targets	Out of the 1,449 reporting signatories (with USD 90 trillion AUM), 480 signatories reported on voluntary climate indicators in 2018; 39 per cent of asset owners (sample size: 338) and 31 per cent of asset managers (sample size: 1,111) reported on the new TCFD-aligned climate indicators. More than160 investors (with USD 30 trillion AUM) and 23 credit rating agencies (CRAs) have commit to incorporating ESG into credit risk and ratings statements.	Integration, Targets
CDP	–	Corporations	Reports on climate-related and TCFD consistent reporting by companies (governance, strategy, risk management, metrics and targets).	69 per cent of 2,508 companies (with USD 41 trillion in market capitalization) disclosing information on at least 80 per cent of the TCFD recommended disclosures.	Integration
Science Based Targets Initiative	–	Banks, Corporations	Tracks number of companies setting science-based GHG emissions reduction targets, and their operational emissions.	More than 670 companies, with market capitalization of USD 10.8 trillion) are setting science-based GHG emissions reduction targets	Integration, Targets
S&P Global, S&P Global Ratings, Moody's Investors Service and Fitch Ratings and other credit rating agencies.	Financial services	Corporations	Analyzed how frequently environmental and climate risks were an important factor in the rating action, tracking changes in the outlook or rating driven by environmental and climate risks (or opportunities).	ESG risks are material credit consideration in 33 per cent of the 7,637 private-sector rating actions in 2019 (Moody's Investors)	Integration
We Mean Business	Listed equity, Bonds	Banks, Corporations	List of companies that support TFCD recommendations and commit to implementing them	1,362 companies with USD 24.8 trillion of the market capitalization are committed to transition to a zero-carbon economy (like RE100 initiative, EP100 initiative etc).	Targets

Table 2.10 (continued)

Available data sets relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

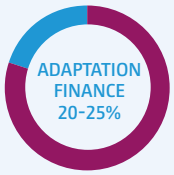
Datasource	Asset Class	Actor Class	Description	Datapoints	Flows, Integration, Targets
Institutional Investors Group on Climate Change (IIGCCC) Net Zero Investment Framework.	Assets under management	Institutional Investors	Provides actions, metrics and methodologies on decarbonizing investment portfolios	–	Integration, Targets,
UN-convened Net-Zero Banking Alliance	Loans	Banks	Aligning lending and investment portfolios with net-zero emissions by 2050	53 banks from 27 countries representing almost a quarter of global banking assets (over USD 37 trillion)	Targets
UN-convened Net-Zero Asset Owner Alliance	Assets under management	Institutional Investors	Aligning portfolio with-net zero emissions by 2050	Over 40 institutional investors with USD 6.6 trillion in assets under management	Targets
Net Zero Asset Managers Initiative	Assets under management	Asset Managers	Aligning portfolio with-net zero emissions by 2050	128 signatories representing USD 43 trillion in assets under management	Targets

Chapter 3

ASSESSMENT OF CLIMATE FINANCE FLOWS

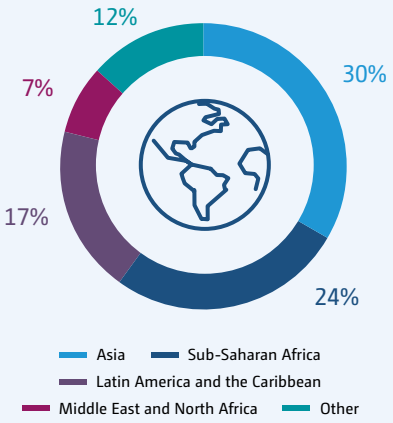
Support for mitigation remains greater than support for adaptation

Across finance flows from bilateral sources, multilateral climate funds and MDBs, **adaptation finance stood at between 20-25 per cent**



Assessing the balance between mitigation and adaptation can be complicated by different approaches to measuring climate finance flows. Taking account of different financial instruments used, the number of interventions or how different institutions are allocating finance can help inform discussions on balance

The Asia region received the most funding commitments, followed by Sub-Saharan Africa, and Latin America and the Caribbean

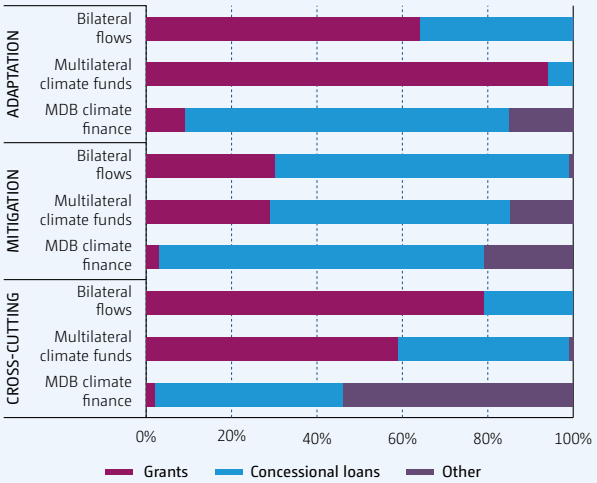


Grants continue to be a key instrument for the provision of adaptation finance

In 2017–2018, grants accounted for 64 and 94 per cent, respectively, of the face value of bilateral adaptation finance reported to the OECD and of adaptation finance from the multilateral climate funds. During the same period, 9 per cent of adaptation finance flowing through the MDBs was grant-based.

Mitigation finance remains less concessional in nature, with 30 per cent of bilateral flows, 29 per cent of multilateral climate fund approvals and 3 per cent of MDB investments taking the form of grants.

These figures, however, may not fully capture the added value brought by combining different types of financial instruments, or technical assistance with capital flows, which can often lead to greater innovation or more sustainable implementation.



Climate finance flows to Least developed countries (LDCs) and small island developing states (SIDS) as a porportion of overall finance flows remained stable. While flows going to adaptation fell from 2015-2016 period, they were replaced by amounts going to cross-cutting projects and grant finance increased.

		Adaptation	Mitigation	Cross-cutting	Grants	Concessional loans	Other
LDCs							
Share of bilateral flows	22%	43%	30%	27%	71%	29%	0%
Share of multilateral climate fund	24%	43%	30%	25%	79%	21%	0%
Share of MDBs	11%	45%	55%	0%	n/a		
SIDS							
Share of bilateral flows	2.40%	19%	32%	50%	81%	19%	0%
Share of multilateral climate fund	10%	35%	23%	42%	85%	13%	2%
Share of MDBs	3%	63%	37%	0%	n/a		

Increase Decrease Same

In 2017-2018, there continued to be a push to diversify modalities of access to climate finance

A 2019 survey found **73% identified finance from multilateral climate funds as the most challenging source of finance to access**

Recent years have seen **a significant rise in accreditation of national and regional implementing entities, civill society and private sector organisation to multilateral climate funds**, driven largely by the Green Climate Fund

However, shares of climate finance approvals through national or regional implementing entities was **7 per cent for all mulilateral climate funds** and **11 per cent for UNFCCC funds** in the 2017-2018 period

Insights on global climate finance in context

Although climate finance flows are increasing, they remain relatively small in the broader context of other finance flows, investment opportunities and costs. The level of climate finance is considerably below what would be expected in view of the investment opportunities and needs that have been identified.

Financial flows and stocks in GHG-intensive activities remain concerningly high. Given the scale and speed needed for the transformation to low GHG emission and climate-resilient development pathways, a sole focus on positive climate finance flows will be insufficient to meet the overarching objectives of the Paris Agreement.

3.1 Introduction

235. This chapter assesses the public concessional finance from developed to developing countries. This is an important subset of the climate finance flows presented in chapter 2. Public finance can often absorb more risk and accept lower returns than private finance. Concessional public finance, with no or lower return expectations, therefore has a strong role to play in research, demonstration and supporting private climate finance flows.

236. Drawing on best available data and research, the chapter focuses on the BRs and the BURs submitted by Parties to the Convention. The discussion is complemented by data from OECD DAC, by project-level data supplied by a number of multilateral climate funds and made available on the CFU Data Dashboard, and by overall climate finance reporting by the MDBs. These data are analysed by the authors and not by the institutions supplying the data.

237. The chapter first considers the key features of concessional public climate finance flows from developed to developing countries, including:

- Thematic focus of climate finance, particularly its support for adaptation and mitigation;
- Financial instruments used in climate finance programming;
- Geographic distribution of climate finance, particularly its support for SIDS and LDCs.

238. Subsequently, the chapter presents insights into the effectiveness of these climate finance flows to developing countries. This explores questions of interest in the context of the Convention's objectives and of the goals outlined in the Paris Agreement such as access to and ownership of climate finance and the impact of public climate finance flows, in addition to the potential drivers of climate finance.

239. The chapter concludes with a reflection on the overall amount of climate finance. An attempt is made to place the identified climate finance flows in the context of wider finance flows.

Table 3.1

Characteristics of international public climate finance flows in 2017–2018

	Annual average	Area of support				Financial instrument		
	(USD billion)	Adaptation	Mitigation	REDD-plus[a]	Cross-cutting	Grants	Concessional loans	Other
Multilateral climate funds[b]	2.7	20%	48%	5%	27%	53%	40%	8%
Bilateral climate finance[c]	32.1	20%	65%	-	21%	64%	36%	<1%
MDB climate finance[d]	39.2	25%	75%	-	-	5%	75%	20%

Note: All values based on approvals and commitments.

a. 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: REDD+.

b. Including the ASAP, AF, Bio Carbon Fund, Clean Technology Fund, FCPF, FIP, GCCA, GEF Trust Fund, GCF, LDCF, PMR, PPCR, SREP, SCCF and UN-REDD Programme.

c. Bilateral climate finance data are sourced from BRs from Parties included in Annex II to the Convention (that further include regional and other channels) for the annual average and thematic split. The financial instrument data are taken from data from the OECD DAC, referring only to concessional flows of climate-related development assistance reported by OECD DAC members. Section C of the summary and chapter III of the technical report use 'bilateral finance' to refer only to concessional flows of climate-related development assistance reported by OECD DAC members.

d. The annual average and thematic split of MDBs includes their own resources only, while the financial instrument data include data from MDBs and from external resources, due to the lack of data disaggregation.

3.2 Thematic objectives and geographic distribution of public concessional climate finance from developed to developing countries

240. This section considers the nature of the concessional public climate finance flows that developed countries have made available to developing countries. BR data are used where possible, supplemented by detailed reporting on the activities of multilateral climate funds, as well as by data reported to OECD DAC on concessional flows of committed climate-related development assistance reported by OECD DAC members (henceforth referred to as "bilateral finance"). Such complementary sources of data are often more complete and more granular, which makes it possible to gain more profound insights into key trends in public climate finance than if only BR data were to be used. The different classification systems used in these data sets, however, make comparisons quite difficult. For example, the OECD list of eligible countries does not fully correspond to that of the non-Annex II Parties, and the OECD and MDB data sets use different regional groupings. No attempt is made to reconcile the data sets, however (see annex A for details of which countries are included under the various classification systems).

241. Data sources can be overlapping. Each data source is reviewed separately to avoid double counting and the over-inflation of climate finance from developed to developing countries. The annual average of bilateral, multilateral and core/general funding as reported in the CTF tables of BRs was USD 48.6 billion in 2017–2018. During the same period, annual average climate-related bilateral finance flows reported to OECD were USD 32.7 billion in 2017–2018; USD 2.7 billion per year was channelled through multilateral climate funds in 2017–2018, including the five UNFCCC funds; and annual average MDB finance flows were estimated at USD 39.2 billion in 2017–2018.[50]

3.2.1 Thematic objectives of public concessional climate finance from developed to developing countries

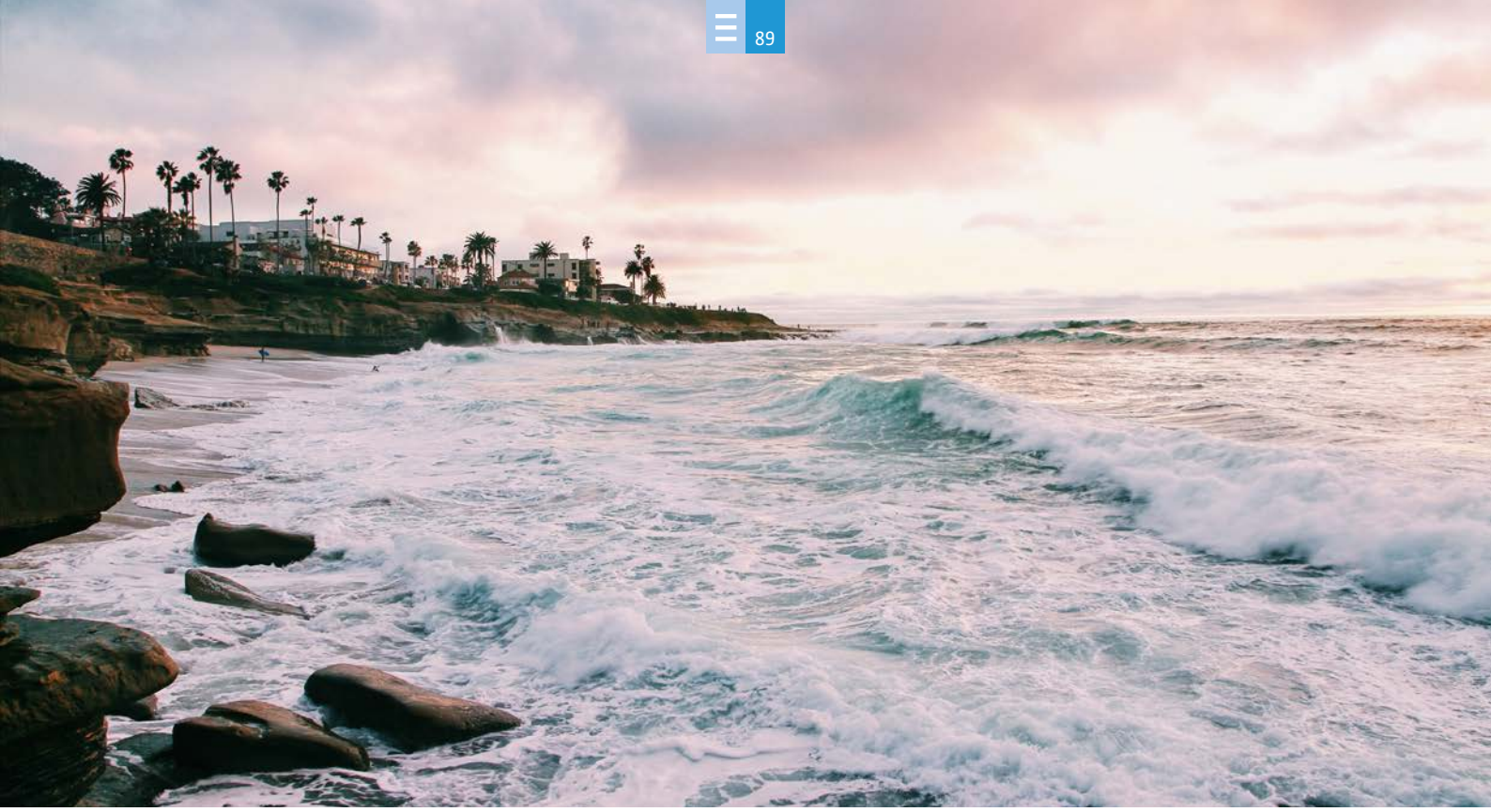
242. Drawing on the available reported data, this section considers the thematic objectives of climate finance flowing to developing countries. The decisions taken by the COP in Copenhagen (2009), Cancun (2010) and Durban (2011) have all sought to achieve a balance between adaptation and mitigation finance. This is also reflected in Article 9.4 of the Paris Agreement, which states that "[t]he provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation". Balance, however, is not defined by consensus under either the Convention or the Paris Agreement (Box 3.1).

243. The "type of support" is specified in BRs submitted by developed countries for 74 per cent of the funding that they provided to developing countries in 2017–2018. The remainder (i.e. finance flows not thematically specified in CTF tables) continues to be made up of "core" contributions to the operating budgets or portfolios of multilateral organizations, including United Nations system agencies and MDBs, which then channel this funding towards climate projects. In some cases, thematic objectives may be specified at a later stage. Of the financing associated with a type of support in BRs, 21 per cent had adaptation as a specified objective in the 2017 and 2018 period, while 65 per cent had mitigation as a specified objective in the same period (see figure 3.1). As noted in chapter 1, the growth of "cross-cutting" type of support in BRs may be attributed to the inability to differentiate the theme of support through multilateral channels. Further, the "other" support type results where multiple sectors are selected, or if the sector is not recognized.

244. Bilateral finance with climate change objectives reported to OECD DAC amounted to USD 32.7 billion in 2017–2018 per year, as compared to USD 31.8 billion in 2015–2016 and USD 23.0 billion in 2013–2014 (in 2018 USD). Of the total bilateral climate finance provided in 2017–2018, 29 per cent was earmarked for adaptation projects and activities; a relatively stable share over time. The proportion earmarked for mitigation was 45 per cent in 2017–2018, whereas climate finance with both mitigation and adaptation objectives made up around 27 per cent of bilateral flows. The proportion of bilateral flows earmarked for mitigation has been slowly declining over time – from 52 per cent in 2011–2012, with a concurrent rise in cross-cutting finance flows from 21 per cent in 2011–2012 (see figure 3.2.a)

245. Funding channelled through multilateral climate change funds amounted to USD 2.8 billion per year in 2017–2018,as compared to USD 1.8 billion per year in 2013–2016. Of the funding channelled through dedicated multilateral climate funds, an average of 20 per cent supported adaptation in 2017–2018, compared to 26 per cent 2015–2016. An average of 48 per cent

50) This estimate of MDB financing, as well as related estimates given in the remainder of this section, is based on total MDB climate finance (i.e. including the banks' own and external resources, and also including EU recipients), unless stated otherwise. This is necessary because of the lack of disaggregated MDB data by region, theme and financial instrument.

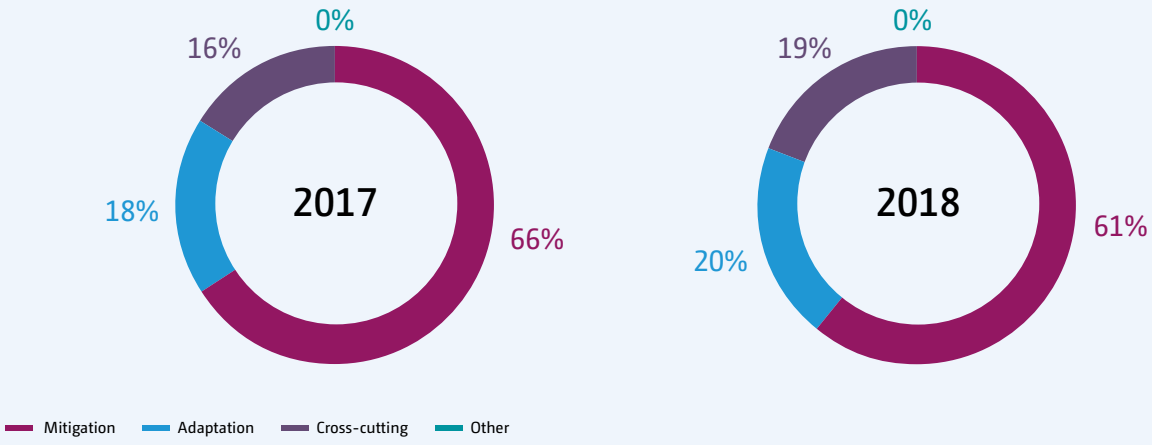


supported mitigation in 2017–2018, a similar proportion to mitigation support in the 2015–2016 period. While trends over time show a recent decline in the proportion of adaptation finance, the observed increase in climate finance with cross-cutting objectives between 2011 and 2018, from 4 per cent to 27 per cent, makes it harder to assess the total adaptation finance approved by the multilateral climate change funds (see figure 3.2.b).

246. MDB climate finance flows were estimated at USD 39.2 billion per year in 2017–2018, an increase on USD 26 billion in the 2013–2016 period. Mitigation accounts for 75 per cent of MDB climate finance in 2017–2018. Since 2012, around 80 per cent of their portfolios has been channelled to mitigation, despite the MDBs' 2015 announcement that they were determined to redress the mitigation bias in their climate finance portfolios. In 2017–2018, the MDBs earmarked an average of 25 per cent of climate finance for adaptation projects and activities, compared to 21 per cent of climate finance for adaptation projects and activities in 2015–2016, and 19 per cent in 2013–2014 (see figure 3.2.c).[51]

Figure 3.1

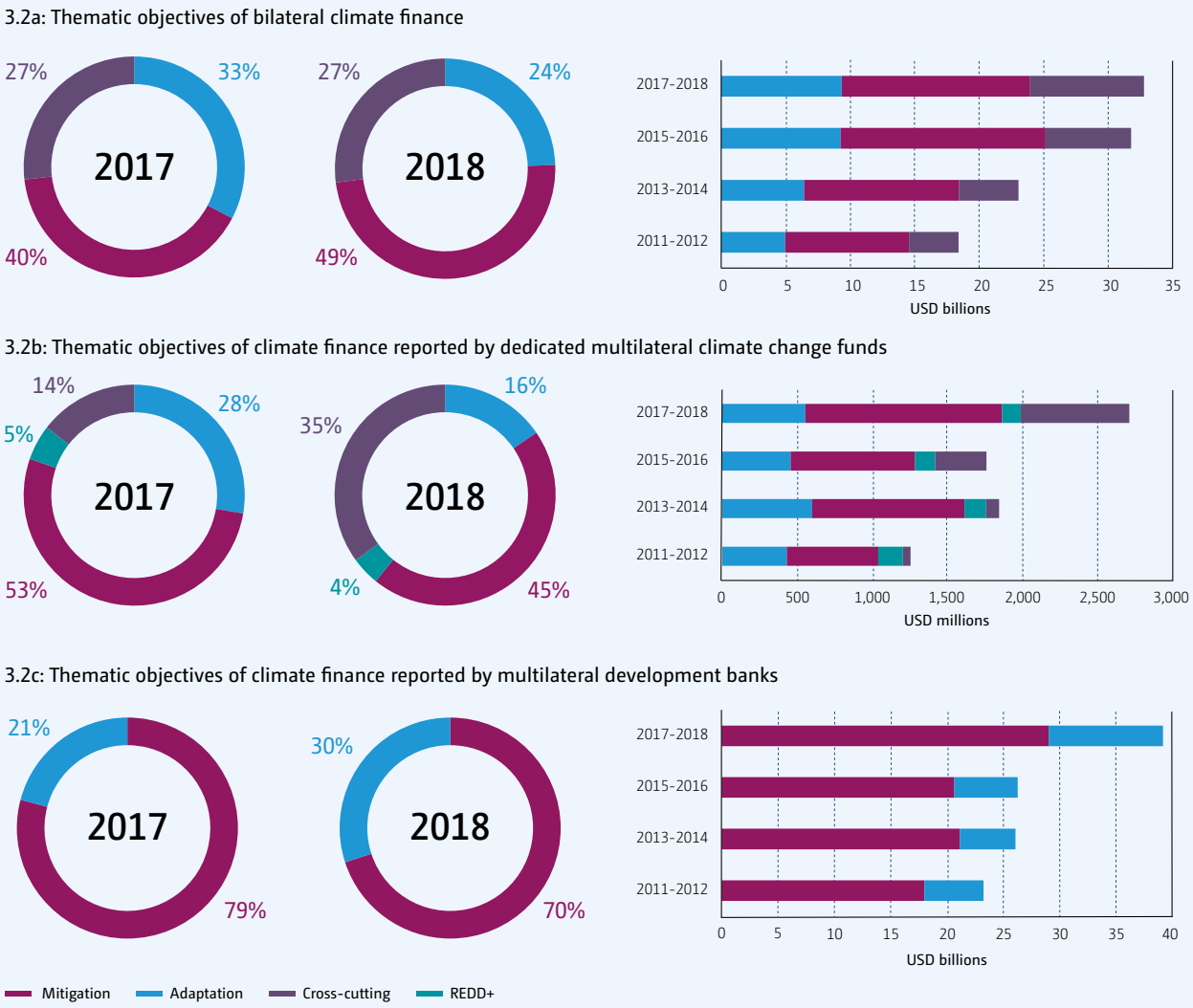
Thematic objectives of finance in developed country biennial reports in 2017 and 2018



51) MDBs are also moving toward the identification of cross-cutting finance that has both adaptation and mitigation benefits. Many MDBs individual processes will determine which proportion of a project, sub-project or project element will contribute to either mitigation or adaptation, to avoid double counting. Since 2017, the EBRD and IDBG track cross-cutting finance separately within their internal figures.

Figure 3.2a–c

Thematic objectives of reported public concessional climate finance from developed to developing countries



Source: Authors analysis of OECD DAC CRS statistics, CFU, 2020, AfDB et al, 2014, 2015a, 2016, 2017, 2018, 2019

247. Finance supporting sustainable forestry and land use often contributes to both mitigation and adaptation. The SCF in 2015 identified a lack of data on forest-related climate finance, however. It highlighted the complexities that exist in the tracking of finance supporting forestry given the many direct and indirect drivers of land use.[52] The information that does exist is largely focused on REDD+ and specifically that for REDD+ readiness, widely understood to be the development of national strategies or action plans, policies and measures and capacity-building, followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer, and results-based demonstration activities. Such activities are then anticipated to evolve into results-based actions that should be fully measured, reported and verified.[53]

248. In BRs, finance for forestry is often included as "cross cutting" and some countries have historically included forestry spending as "other" in the categories of type of support, making it hard to identify. When reporting on bilateral climate-related finance, OECD DAC does not use an additional layer to identify forest

52) See the background paper prepared for the 2015 SCF forum, which is available at https://unfccc.int/sites/default/files/background_paper_prepared_for_the_2015_scf_forum.pdf.

53) Decision 1/CP.16, paragraph 73.

Box 3.1

Informing discussions on the balance between mitigation and adaptation finance

Assessing the balance between mitigation and adaptation finance is a frequent topic during climate finance discussions. However, adaptation and mitigation finance can be measured using different approaches (see section 1.2). This limits the comparability of data between themes and complicates an assessment of balance between them. The thematic distribution of climate finance through various channels is reported in this chapter at face value but there are different ways of measuring finance towards thematic objectives that can inform discussions on balance.

In the OECD DAC CRS, as the Rio markers are not a quantitative measure but rather a measure of the level of mainstreaming of climate objectives in the reported activities, distinguishing whether the activity has principal or significant climate objectives (or not targeted), yet climate-related development finance – as analysed here – includes all finance commitments marked principal and significant at face value.

MDB data, through the Common Principles approach, considers only the climate component of programmes and projects. Mitigation components of projects can be easier to identify under this approach where the climate proportion of the total project cost can range from small in energy efficiency projects to the full amount in renewable energy projects. For adaptation finance, the principles require a clear and direct link between vulnerability and the project activities, and the component costs can typically be a smaller proportion of project costs. This can lower relative shares of adaptation finance than through other data sources. For MDB climate finance, the share of climate components within overall projects costs is reported through the OECD DAC. The climate component costs of projects over 2017–2018 are distributed 29 per cent, 67 per cent and 4 per cent to adaptation, mitigation and cross-cutting projects, respectively. At the level of total cost of these projects, the distribution results in 43 per cent, 54 per cent and 3 per cent, respectively. Adaptation components make up 24 per cent of the total cost of adaptation projects, while mitigation components make up 43 per cent of the total cost of mitigation projects.

In data reported by Annex II Parties through biennial reports, some Parties apply a fixed coefficient to Rio markers reported to the OECD DAC, while others apply an activity level component approach (see sections 1.2.1 and 1.3.2). At face value, 21 per cent of climate-specific flows reported through bilateral, regional and other channels was targeted to adaptation activities compared to 64 per cent for mitigation, yet half of the Parties, where allocation decisions are made, reported more finance to adaptation than mitigation activities.

The mix of different financial instruments employed may also be used to inform discussions on balance. For example, the GCF seeks a balance between mitigation and adaptation, with the intention to spend 50% of its funding on adaptation, of which 50% is to be spent in the LDCs, SIDS and African States, and 50% on mitigation, all tracked on a grant-equivalent basis. Therefore, the GCF reports a distribution of 36 per cent of project funding up to November 2020 to adaptation and 64 per cent to mitigation in nominal terms but 50 per cent each in grant-equivalent terms. This allows a comparison of funding amounts taking into account the different financial instruments employed.

In cases where component values of projects are reported, it may also be appropriate to examine the number of interventions, projects or activities, in addition to their associated financial amounts, to assess whether an appropriate balance of effort is reflected as well as a balance on finance flows.

Source(s): GCF information available at https://www.greenclimate.fund/sites/default/files/document/gcf-b27-02-rev03.pdf.

finance. It is possible, however, to identify broader ODA provided to the forestry sector in the OECD DAC database. Moreover, the MDBs do not single out forest-specific finance when reporting on their climate finance. It is only the climate spending of the multilateral climate funds that is forestry related that is more readily identified. This is largely due to the emphasis on REDD+ activities in the UN-REDD Programme, the FCPF and the FIP, though these activities are predominantly readiness based. More recently, the GCF USD 500 million pilot programme for REDD+ results-based payments, launched in 2017, has been driving REDD+ action. By the end of 2020, eight projects with a total amount of USD 497 million in results-based payments had been approved (Schalatek and Watson, 2019).

249. Finance flows from the multilateral climate funds in 2017–2018 to support REDD+ activities were on average 5 per cent of the total spending, a decline on previous time periods (and before the approval of REDD+ performance-based payments through the GCF). REDD+ finance, however, does not make up all forest-related climate finance. In addition to the pilot programme for REDD+ results-based payments, the GCF, for example, has a number of further projects with forestry components that are categorized as cross-cutting in terms of their thematic objective (Watson and Schalatek, 2020).

250. Finance to support sustainable forest and land-use activities not only arises in the pursuit of climate change mitigation and adaptation goals. The Bonn Challenge

(2011) and the New York Declaration on Forests (2014), for example, both pursue goals and mobilize finance supporting sustainable forest use that may contribute to but may not be reported as finance supporting climate change mitigation and adaptation.[54]

251. Financing arrangements to avert, minimize and address loss and damage, particularly in those developing countries that are most vulnerable to the impacts of climate change, has become an increasing focus of discussions under the Paris Agreement. Article 8 of the Paris Agreement refers to Parties' recognition of the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change. It identifies the following areas of cooperation and facilitation to enhance understanding, action and support: early warning systems; emergency preparedness; slow onset events; events that may involve irreversible and permanent loss and damage; comprehensive risk assessment and management; risk insurance facilities, climate risk pooling and other insurance solutions; non-economic losses; and resilience of communities, livelihoods and ecosystems. There is no mention of finance in this Article. One of the functions of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts – established at COP 19 in 2013[55] - is, however, to enhance relevant action and support, including finance, technology and capacity-building.

252. In 2016, Parties tasked the UNFCCC secretariat with the preparation of a technical paper elaborating the sources of and modalities for accessing financial support for averting, minimizing and addressing loss and damage.[56] The 2016 SCF Forum further explored financial instruments that address the risks of loss and damage associated with the adverse effects of climate change. The Forum discussed four broad financial instruments and tools: (1) risk transfer schemes; (2) catastrophe and resilience bonds; (3) social protection schemes; and (4) contingency finance. It concluded that, although there was a range of approaches for addressing the risks of loss and damage, more work was needed to develop suitable financial instruments.[57] It identifies that the types of knowledge, action, support and approaches to address loss or damage, as identified under the Warsaw International Mechanism to date, vary considerably and are wide in scope. In part, this is because responses extend to several domains, including disaster risk management, risk transfer and pooling, contingency and humanitarian measures, adaptation to climate change and climate-resilient development.[58]

253. Loss and damage finance for extreme weather will be different in nature to that for slow onset events. Extreme weather events often necessitate rapid pay-outs and can lead to more costly capital, for example, as the frequency and severity of such events increase. Slow onset events[59] in contrast, point instead to financial protection for the most vulnerable or human displacement. With challenging demarcation and with no common classification for finance flows, significant challenges exist in collecting and aggregating information on finance flows and modalities to address loss and damage. As such, financing arrangements are not represented in the financial flows assessed in this report.

254. It has emerged that the development and use of financial instruments to avert, minimize and address loss and damage requires greater information and knowledge on climate-related risk and assets at risk, as well as an adequate policy and regulatory environment (Pandit Chhetri et al., 2021). As echoed in the highlights of the 2016 SCF Forum, a holistic and integrated approach is needed, but no one size will fit all, both in the measures taken but especially in the set of financial instruments used to address the risk of loss and damage and the financial and regulatory infrastructure that these instruments will sit within.

Financial instruments employed by concessional public climate finance from developed to developing countries

255. Financial instruments indicate how capital is deployed and the conditions upon it. There are four main financial instruments through which concessional public climate finance flows from developed to developing countries: grants, concessional loans, guarantees and equity.

256. Bilateral climate finance flows and those through the multilateral climate funds for adaptation were significantly grant based, while MDB climate finance remained predominantly loan based (figure 3.3):

54) Available at http://www.bonnchallenge.org/content/challenge and https://nydfglobalplatform.org.

55) Decision 2/CP.19.

56) Decision 4/CP.22, paragraph 2(f).

57) See FCCC/TP/2019/1 available at https://unfccc.int/sites/default/files/resource/01_0.pdf.

58) See the web page of the 2016 SCF forum at https://unfccc.int/event/2016-forum-standing-committee-finance.

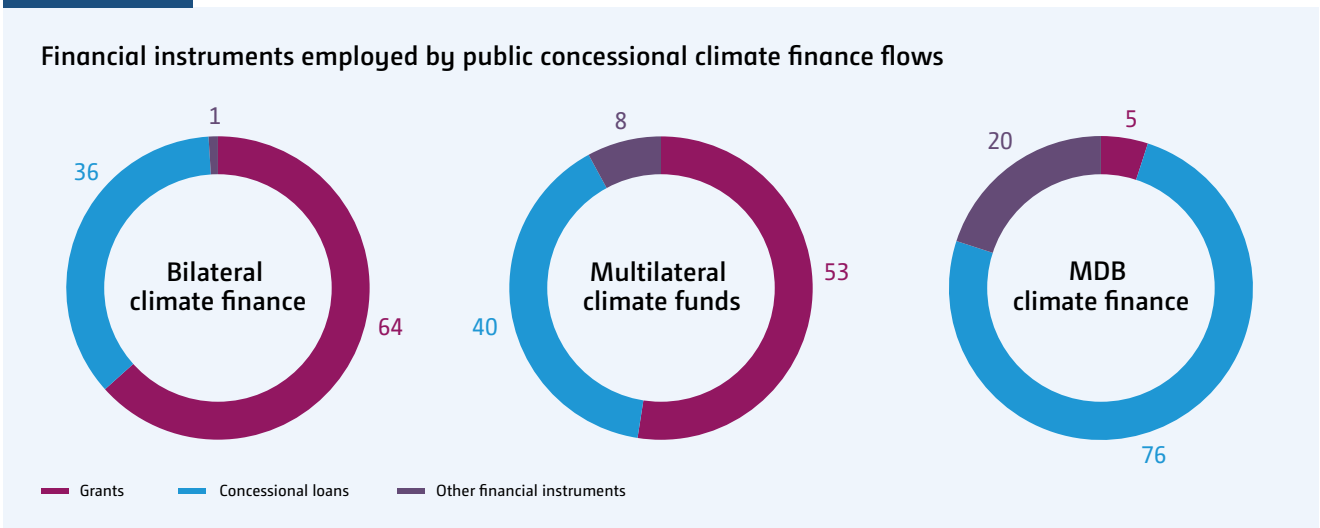
59) Slow onset events, as identified in decision 1/CP.16, para. 25, include sea level rise, increasing temperature, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.

- In 2017–2018, 64 per cent of bilateral climate finance for adaptation took the form of grants, whereas just 30 per cent of mitigation finance was grant-based (compared to 63 per cent and 26 per cent, respectively, in 2015–2016). The remainder was provided mainly via concessional loans with a small amount of equity also applied.[60]
- Of the adaptation finance provided by the multilateral climate funds, 94 per cent took the form of grants in 2017–2018. The remainder was approved as concessional loans. This is comparable to 96 per cent of adaptation finance taking the form of grants in the 2015–2016 period. By contrast, only 29 per cent of mitigation finance from the multilateral climate funds took the form of grants in 2017–2018, with 56 per cent provided as concessional loans, 10 per cent as equity and the remainder as guarantees.
- The MDBs – considering both their own and external resources – provided 9 per cent of their adaptation finance in the form of grants in 2017–2018; investment loans[61] were their instrument of choice, accounting for 76 per cent of adaptation finance and 76 per cent of the mitigation finance they provided (highly comparable to the share of financial instruments by theme of type of support in 2015–2016).

257. The reality of financing is that many financial instruments can be combined in a number of ways to fit a given context in a single project. This can bring the added value of, for example, combining technical assistance with capital flows, which can often lead to greater innovation or more sustainable implementation (Carter, 2020). It remains important, however, to consider the debt burden of particular financial instruments in the country or institution through which they are being supplied.

258. Insurance is a financial instrument that can also be used to support climate action. Insurance acts to share and spread the financial consequences of physical climate risk, in particular by increasing the finance available during recovery from climate-related hazard events. Insurance cannot replace efforts to reduce climate risks, however. Insurance instruments need to be carefully designed to incentivize further adaptation[62] and avoid maladaptation (Müller, Johnson and Kreuer, 2017; OECD, 2015a), as well as to support those most vulnerable to the adverse impacts of extreme events (Hillier, 2018; Schaefer and Waters, 2016). Insurance can therefore only be a complementary tool for addressing the impacts of climate change. It is not well-suited, for example, to cover slow onset processes, such as sea level rise and desertification, or events occurring with extremely high frequency, which call for alternative climate finance instruments.

Figure 3.3

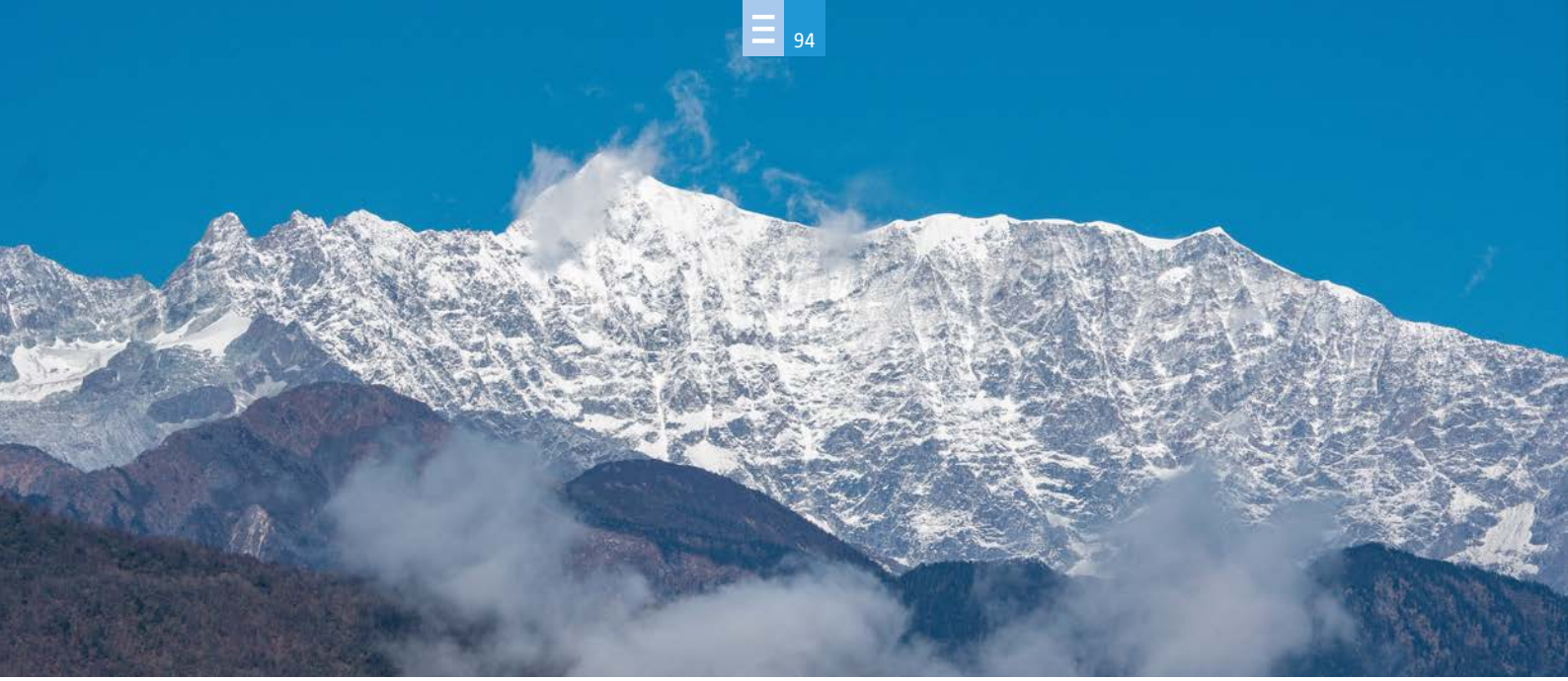


Source: Authors analysis of OECD DAC CRS statistics, CFU, 2020, AfDB et al, 2014, 2015a, 2016, 2017, 2018, 2019.

60) The bilateral finance reported in this chapter is only that which is concessional in nature, from the OECD DAC members to OECD DAC recipients. The eligible recipients of such ODA from OECD DAC are exclusively low- and middle-income countries, as based on GNI per capita. The list also includes all least developed countries. The list of possible recipients of the concessional finance is revised every three years and countries that exceed the income threshold for three consecutive years are removed. Climate finance flows from OECD DAC donors to countries that have graduated from OECD DAC recipient status – but are still eligible for climate finance – are therefore not represented here

61) In the case of countries receiving financial assistance from the International Development Association (part of WB) and the Asian Development Fund (part of ADB), these investment loans are equivalent to concessional loans.

62) A moral hazard can arise if incentives to manage a particular risk are reduced as a result of access to insurance. Associated policies and careful design of the insurance on offer, by such means as risk-based premiums and deductibles, can help to deal with such issues. Well-designed programmes may also incentivize risk management (Nakhooda and Watson, 2016).



259. Efforts to increase the scope of insurance to support adaptation and build resilience to climate change are not fully represented in the financial flows assessed in this report. Relevant initiatives by the insurance industry have sought to enhance national coverage against losses from extreme weather events, as well as to strengthen the provision of crop, livestock and flood insurance for individuals and households. A number of multi-country risk pools are now functioning that provide "parametric" insurance policies, for example, where payouts are triggered by climate-related events rather than by the reporting of losses (which may not necessarily be due to climate-related events). CCRIF was the world's first multi-country risk pool. In 2017, it made 14 payouts totalling USD 61.4 million, largely in response to hurricane Irma and Maria. While in 2018, it made 2 payouts totalling USD 8.3 million. These amounts support liquidity in the aftermath of a climate-related event, though payouts on their own are not sufficient to cover increased expenditures and/or debt payments, for example. Total payouts made by CCRIF since its commencement in 2007 until December 2020 passed the USD 197 million mark, supporting 14 governments (CCRIF, 2019). The African Risk Capacity, an agency of the African Union, supports member States to strengthen disaster risk management systems. It includes the ARC Insurance Company Limited that also offers multi-country risk pooling and since 2014 over USD 64 million is reported to have been paid out.[63]

260. In addition to the role of insurance in transferring physical climate risk, the insurance industry can support adaptation and mitigation action more widely. This includes sharing of its expertise in risk management, incentivizing risk reduction and developing new insurance products.[64] There are a number of initiatives supporting the insurance sector to manage and respond to sustainability challenges. The Munich Climate Insurance Initiative was established in 2005 to foster public–private partnerships in the creation of insurance mechanisms that can protect the most vulnerable communities against weather-related disasters.[65] In 2012, the UNEP Finance Initiative launched the Principles for Sustainable Insurance Initiative serve as a global framework for the insurance industry to address environmental, social and governance risks and opportunities.[66] The InsuResilience Investment Fund started operations in 2015, contributing to adaptation by improving access to and the use of insurance in developing countries. Administered by KfW Development Bank on behalf of Germany, it both lends to financial institutions and aggregators in return for their participation in the development and distribution of climate insurance and invests in insurers and brokers actively building the market for climate insurance.[67]

3.2.2 Geographic distribution of public concessional climate finance from developed to developing countries

261. Figure 3.4 analyses the geographic distribution of different channels of public concessional climate finance from developed to developing countries. Climate finance in support of mitigation has historically been directed to countries and regions in which emission levels are high and rising rapidly (e.g. large emerging economies).

63) Available at https://www.africanriskcapacity.org.

64) See, for example, the "Global insurance industry statement on: Adapting to climate change in developing countries", which is available at http://www.unepfi.org/fileadmin/documents/insurance_climat-echange_statement.pdf.

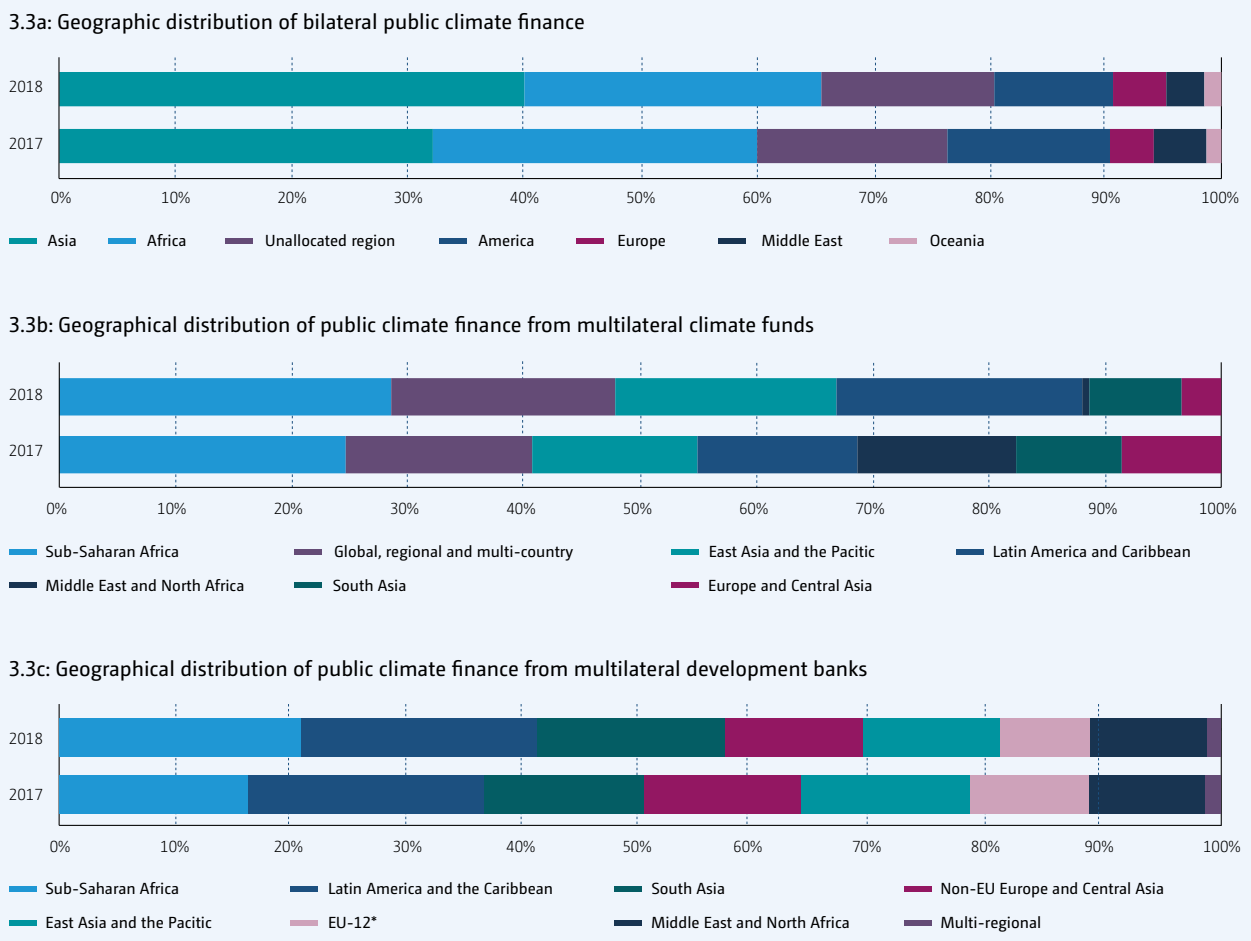
65) Available at http://www.climate-insurance.org/about/.

66) Available at https://www.unepfi.org/psi/.

67) Available at https://www.insuresilienceinvestment.fund/about-insuresilience-investment-fund/.

Figure 3.4

Geographic distribution of public climate finance (a–c)



Source: Authors analysis of OECD DAC CRS statistics, CFU, 2020, AfDB et al, 2014, 2015a, 2016, 2017, 2018, 2019

262. The Asia and Pacific region as a whole, remains the dominant beneficiary region of the three public concessional climate finance sources analysed receiving on average, 30 per cent of commitments through these sources:

- Bilateral public finance sources committed 36 per cent across Asia in 2017–2018. Adaptation accounted for 27 per cent of bilateral public commitments in Asia, with 64 per cent committed to mitigation actions, with the remainder cross-cutting in nature. The total and thematic split in Asia is consistent with the 2015–2016 level of commitment. In 2017–2018, 80 per cent of commitments was provided through debt instruments and 20 per cent through grants. The proportion of commitments provided through debt instruments has shown gradual increase over time in Asia, from 68 per cent in 2011–2012. Grants have concurrently declined, from 32 per cent in 2011–2012.
- Across the major multilateral climate change funds, 25 per cent in 2017–2018 was approved to support projects in Asia and the Pacific. This was down from a third in the 2015–2016 and 2013–2014 periods. Adaptation accounted for only 13 per cent of the total approved amount in 2017–2018, a decline from previous periods, with relatively stable allocations for mitigation and forestry, and a huge increase in cross-cutting finance from 5 per cent in 2015–2016 to 36 per cent in 2017–2018. Of the total approved by major multilateral climate funds in 2017–2018, 33 per cent was made available as concessional loans, with grant finance accounting for 59 per cent and guarantees the remainder. There are a significant number of large projects supported by the Clean Technology Fund in Asia, though as the GCF ramps up project approvals in the region, it is experiencing an increase in cross-cutting project approvals.

- South and East Asia and the Pacific accounted for 28 per cent of MDB climate finance in the period 2017–2018. This is a decline in share from 2015–2016. Of MDB climate finance committed in Asia and the Pacific, 33 per cent was committed to adaptation in 2017–2018, an increase on the previous time period. Adaptation finance from the MDBs covers such sectors as energy, transport, crop and food production and water and wastewater, whereas mitigation finance is focused on renewable energy, transport and energy efficiency.

263. Africa has many climate-vulnerable nation States and is the second dominant recipient region of international public concessional climate finance flows behind East and South Asia and the Pacific, with an average of 24 per cent of committed finance from public concessional climate finance sources analysed:

- The OECD DAC in 2017–2018 reported that 27 per cent of committed bilateral climate-related finance went to the Africa region, a small decline on 31 per cent in 2015–2016. Adaptation accounted for 38 per cent of bilateral flows, compared to 39 per cent in 2015–2016. In 2017–2018, 25 per cent of commitments were provided through debt instruments and 73 per cent through grants; this is a decrease for debt (from 32 per cent in 2015–2016) and a small increase for grants (from 68 per cent in 2015–2016).
- Across the major multilateral climate change funds in 2017–2018, 27 per cent of approved finance was allocated to projects in sub-Saharan Africa. Adaptation projects commanded 38 per cent, similar to the 2015–2016 period but a decline on the 2011–2012 and 2013–2014 periods. Mitigation projects commanded 37 per cent, REDD+ activities 7 per cent and cross-cutting activities 17 per cent in 2017–2018. Of the total to the region from the major multilateral climate funds, 38 per cent was made available as concessional loans, with grant finance accounting for 60 per cent, 1.6 per cent as equity and 0.2 per cent as guarantees. In 2018, the Green Climate Fund became the fund with the largest volume of approved finance in the region, with substantial approved funding also from the Least Developed Countries Fund and the Clean Technology Fund.
- From MDB own and external resources in 2017–2018, 19 per cent of climate finance was committed in sub-Saharan Africa. This represents a sharp increase from 9 per cent in 2015–2016. Of the total, 40 per cent was directed towards adaptation, the remainder directed to mitigation, illustrating a similar ratio between adaptation and mitigation to the preceding time period. MDB adaptation finance for Africa was provided mainly in support of agricultural and ecological resources, crop and food production, as well as of water and wastewater systems, whereas mitigation finance was directed mainly towards renewable energy projects and lower-carbon, efficient energy generation.

264. Latin America and the Caribbean secured, on average, 17 per cent of committed climate finance committed in 2017–2018 across public concessional climate finance flowing from developed to developing countries.

- The OECD DAC in 2017–2018 reported that 12 per cent of committed bilateral climate-related finance went to the Americas.[68] Adaptation accounted for 19 per cent of bilateral flows, similar to the 2015–2016 level, though mitigation finance commitments decreased from 55 per cent in 2015–2016 to 43 per cent in 2017–2018. Debt instruments accounted for 56 per cent of the total in 2017–2018, while grants accounted for 43 per cent in the same period, showing relative stability in shares over time.
- Major multilateral climate funds approved 18 per cent of the total amount to Latin America and the Caribbean in 2017–2018. Just less than half (46 per cent) is intended to support mitigation projects, a decline on previous periods, while adaptation commands 22 per cent. Cross-cutting finance in the region has increased from 4 per cent in 2015–2016 to 20 per cent in 2017–2018, while REDD+ commands 7 per cent of approvals, the highest across all regions. Across multilateral climate change funding approvals, grant finance accounted for 57 per cent, 37 per cent was approved as concessional loans and 6 per cent takes the form of guarantees or equity. Latin America has a number of large Clean Technology Fund programmes, with year-on-year increase in GCF projects.
- From both their own and external resources, MDBs' commitments remain stable at around 20 per cent of finance to Latin America and the Caribbean. In 2017–2018, adaptation commitments accounted for 23 per cent, similar to 2015–2016 ratios, while

68) The OECD DAC does not use the same regional groupings as the MDBs. It has no Latin America and the Caribbean grouping, using instead "America" and it has a separate Oceania grouping.

mitigation continues to dominate MDB flows in the region. MDB adaptation finance in the region supported significant institutional capacity and technical assistance in addition to sectoral support for water and wastewater, energy and transport and crop and food production, whereas mitigation finance supported renewable energy, as well as transport and energy efficiency.

265. The Middle East and North Africa region accounted for 7 per cent of commitments across the three international public climate finance sources analysed here:

- Bilateral finance flows to the Middle East,[69] are estimated at 4 per cent, with 34 per cent flowing to adaptation. Mitigation flows have decreased from over half (52 per cent) in 2015–2016 to 35 per cent in 2017–2018. Debt instruments account for 59 per cent of bilateral flows, while grants make up 41 per cent.
- The share of approved finance from the major multilateral climate change funds in MENA in 2017–2018 was 6 per cent, an increase on the 2015–2016 period. A full 66 per cent of approved funding went towards mitigation, with 32 per cent approved for adaptation projects and the remainder cross-cutting in theme. Grants account for 38 per cent of funding, while the remainder is programmed as concessional loans. Concentrated on a small number of big projects, the Clean Technology Fund remains the fund with the largest approvals for the region, though GCF project numbers are increasing.
- In 2017–2018, commitments in MENA accounted for 10 per cent of MDB climate finance, with the majority (83 per cent) committed to mitigation activities. This is consistent in both share and thematic split to the 2015–2016 period. The MDB adaptation finance in the Middle East and North Africa region supports mainly crop and food production, whereas mitigation finance is focused on renewable energy.

266. Countries in Central, Eastern and South-Eastern Europe, the South Caucasus and Central Asia are eligible for climate finance.[70] This region can also be referred to as "non-EU Europe and Central Asia":

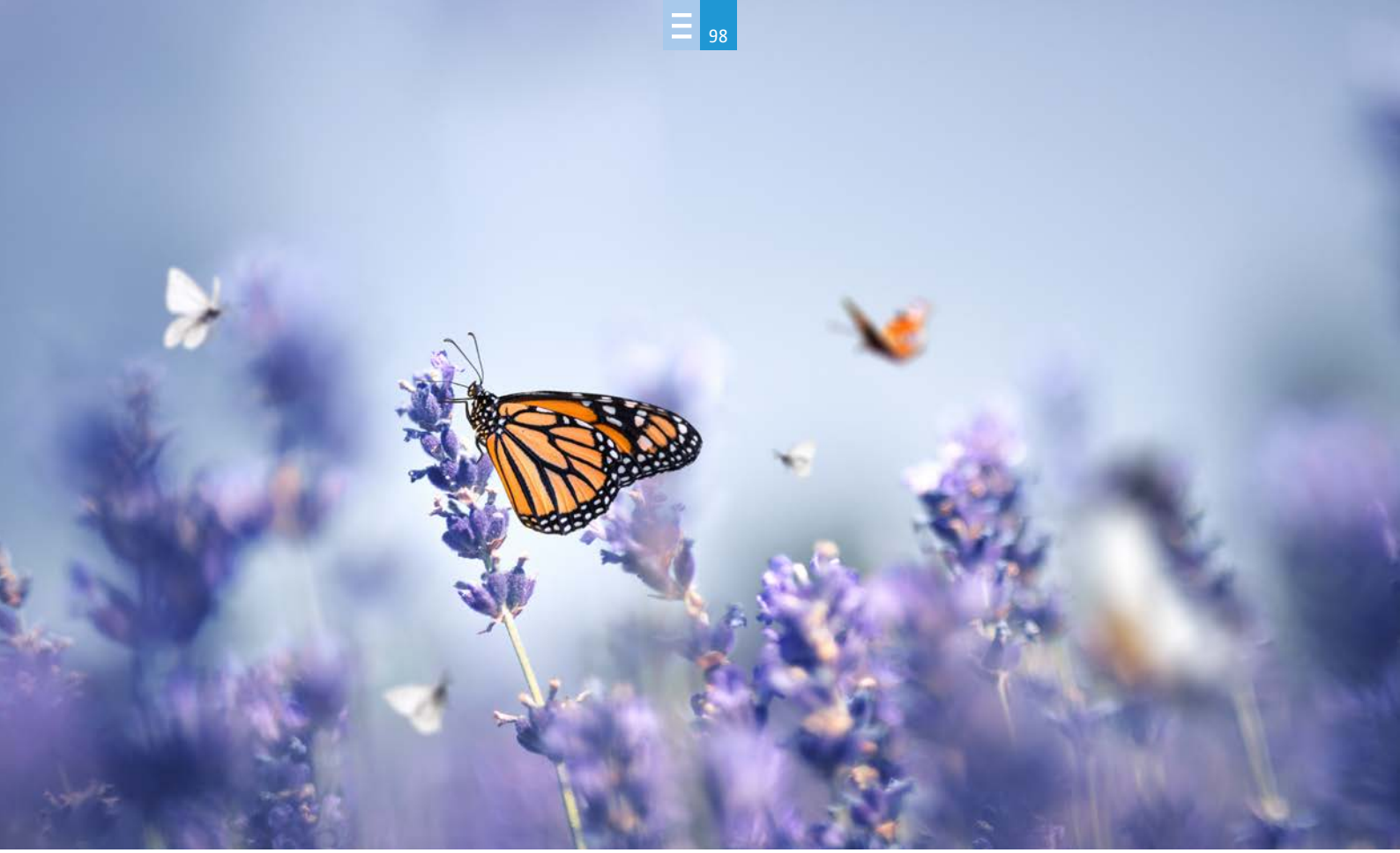
- Bilateral data from the OECD DAC show that 4 per cent of flows were committed in "Europe" in 2017–2018, a small decline on 6 per cent in 2015–2016. Mitigation has consistently been around 40 per cent of commitments, while the adaptation share has fallen from 34 per cent in 2015–2016 to 19 per cent in 2017–2018; with a subsequent rise in cross-cutting projects. The use of debt instruments dropped from 51 per cent in 2015–2016 to 20 per cent in 2017–2018, while the inverse was seen in grants, whose share rose from 48 per cent in 2015–2016 to 79 per cent in 2017–2018.
- The multilateral climate change funds support many countries in Central, Eastern and South-Eastern Europe, the South Caucasus and Central Asia. Of 2017–2018 approved finance, 6 per cent was directed at Central, Eastern and South-Eastern Europe, the South Caucasus and Central Asia. Mitigation is targeted by 58 per cent of approved finance, while adaptation accounts for 18 per cent in 2017–2018, similar to 2015–2016 shares. Concessional loans make up over half (58 per cent) of approvals, with grants accounting for the remainder in 2017–2018. Support to the region has been concentrated through the Clean Technology Fund, facilitating renewable energy and energy efficiency projects. More recently, the AF and the GEF have been supporting smaller, but more numerous, adaptation and cross-cutting projects in the region.
- Of the climate finance provided by the MDBs from their own and external resources, 13 per cent is committed to non-EU Europe and Central Asia. Of this, 85 per cent is directed towards mitigation. This is both a small decline in total share and share of mitigation as compared to MDB finance to non-EU Europe and Central Asia in 2015–2016. Adaptation finance from the MDBs in the region supported mostly energy, transport and the construction of environment infrastructure, whereas mitigation finance supported energy efficiency, transport and renewable energy.

Identifying public concessional climate finance from developed countries to the least developed countries and small island developing States

267. Article 9 of the Paris Agreement emphasizes that the provision of scaled-up financial resources should take into account the priorities and needs of the LDCs and SIDS, which are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints; and that both public and grant-based resources are required to support adaptation.

69) The OECD DAC does not use the same regional groupings as the MDBs: it has a grouping for the Middle East that here excludes North Africa.

70) CESEE refers to Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Hungary, Kosovo, Latvia, Lithuania, Montenegro, North Macedonia, Poland, Republic of Moldova, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Turkey and Ukraine; South Caucasus refers to Armenia, Azerbaijan and Georgia, and Central Asia refers to Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.



268. The LDCs are considered low-income countries that confront structural impediments to sustainable development. There are currently 47 countries considered LDCs (reviewed every three years):[71]

- The bilateral finance committed to LDCs has grown over time but has stabilized at around a fifth of total commitments. In 2017–2018, 22 per cent of bilateral finance flows was committed to LDCs, of which 43 per cent was earmarked for adaptation activities and 30 per cent was earmarked for mitigation activities. The majority of bilateral finance for LDCs is provided as grants (71 per cent).
- The finance approved through multilateral climate change funds directed to LDCs is close to a quarter of total approvals in 2017–2018 (24 per cent). Of multilateral climate change fund approvals, 43 per cent is directed towards adaptation in 2017–2018, a decline on previous time periods. Commitments to mitigation are similar to those in 2015–2016, at 30 per cent in 2017–2018, though commitments to cross-cutting projects are rising (25 per cent in 2017–2018). Of total flows from multilateral climate change funds, 79 per cent is provided as grants, with the majority of the remainder provided as concessional loans (less than 1 per cent is provided as equity or guarantees).
- MDB finance committed to LDCs was 11 per cent of total MDB climate finance flows in 2017–2018, a small increase on 9 per cent in the 2015–2016 period. Just under half was directed to adaptation (45 per cent), significantly higher than the share of all climate finance from MDBs directed towards adaptation activities in 2017–2018, consistent with the preceding time period.

269. There are 39 SIDS recognized as a distinct group of developing countries in the light of their remoteness, small size and vulnerability to environmental challenges. SIDS are found in the Caribbean Sea and the Atlantic, Indian and Pacific Oceans. A number of SIDS are also LDCs:[72]

- In 2017–2018, 2.4 per cent of committed bilateral finance was programmed in SIDS.[73] This proportion has been consistent over previous time periods. In 2017–2018, the share of adaptation fell to 19 per cent, from 47 per cent of SIDS' bilateral commitments in 2015–2016. Cross-cutting bilateral finance grew rapidly to 50 per cent, while mitigation commitments for bilateral finance remained consistent at around 32 per cent. Commitments of bilateral finance in 2017–2018 were predominantly made through grant instruments (81 per cent), with the remainder through debt instruments.

71) As listed at https://www.un.org/development/desa/dpad/least-developed-country-category.html.

72) As listed at https://whc.unesco.org/en/sids/. It is important to note that SIDS can also be LDCs: thus, the data sets are overlapping and should not be aggregated.

73) The analysis of bilateral finance flows to SIDS excludes multiple country projects and includes only the SIDS that are eligible for ODA and so included in the OECD DAC CRS.

- In 2017–2018, 10 per cent of approved finance from the major multilateral climate change funds was directed towards SIDS. This is a small decline on 14 per cent in 2015–2016. The share of this approved finance for adaptation fell to 35 per cent in 2017–2018 from 52 per cent in 2015–2016. The mitigation share of approved finance also fell from 42 per cent to 23 per cent, while cross-cutting SIDS finance increased dramatically in 2017–2018 to 42 per cent from 6 per cent in 2015–2016. The majority of approvals from the multilateral climate change funds were in the form of grants (85 per cent), with 13 per cent as concessional loans and less than 2 per cent in the form of guarantees.
- MDB external and own resources committed to SIDS reached 3 per cent of 2017–2018 total commitments, an increase on 1 per cent in 2015–2016. Much like LDCs, the share of adaptation was much higher than MDB climate finance total in 2017–2018 with 63 per cent of MDB climate finance in SIDS being directed towards adaptation. This represents an increase in adaptation finance from the MDBs to the SIDS from the 2015–2016 period, where adaptation represented 47 per cent of flows.

270. On a per capita basis, SIDS are estimated among the highest recipients of climate finance over 2016–2018, particularly adaptation finance, while LDCs receive relatively lower amounts than average on a per capita basis (OECD, 2020a).

3.2.3 Additionality of climate finance provided

271. In accordance with Article 4, paragraph 3, of the Convention, the financial resources provided to support climate action should be "new and additional". The Paris Agreement does not refer to "new and additional". Article 9.3 of the Paris Agreement states that "developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels", and that such mobilization should "represent a progression beyond previous efforts". Nevertheless, understanding of what is "new" and "additional" varies widely across stakeholders.

272. The guidelines for NCs and BRs require developed countries to provide information on how they have determined that the resources provided to developing countries are "new and additional". Chapter 1 highlights that 21 Parties provided information on "new and additional" resources in their BR submissions, either through their narrative or in data footnotes. Most countries indicate that resources were newly disbursed or committed in the reporting year, others describe how climate finance commitments represent increases on previous levels. Two countries note flows exceeding the 0.7 per cent of GNI target for development finance from DAC members, while one country identified the source of finance and non-traditional ODA channels.

3.3 Effectiveness of climate finance: access, ownership and impacts

273. It is not just the volume of climate finance that is important but also how well that finance achieves its objectives. The importance of ensuring that climate finance is effective is emphasized in various Articles of the Paris Agreement covering a number of interrelated aspects. Access, ownership and impact of climate finance are all explored in the sections below, which also consider the goals of development finance set in 2011 at the Busan High Level Forum on Aid Effectiveness, and are informed by various long-standing frameworks that have been developed by researchers to improve understanding of the effectiveness of climate finance (Nakhooda, 2013; Buchner et al., 2012; Ballesteros et al., 2010).

3.3.1 Access to climate finance

274. Fair and equitable access to climate finance continues to be an important priority. The importance of access to climate finance 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 SIDS".[74] In a 2019 survey of 105 respondents from 45 developing countries, 73 per cent identified finance from multilateral climate funds as the most challenging source of finance to access compared to private finance (62 per cent), MDBs and DFIs (30 per cent) and bilateral sources (17 per cent) (CFAN, 2020). In the absence of meta-reports that address wider issues of access to the various sources and channels of climate finance, this section considers access to the multilateral climate change funds, as a key part of the climate finance architecture.

74) Article 9, paragraph 9.

Accessing climate finance through the multilateral climate change funds

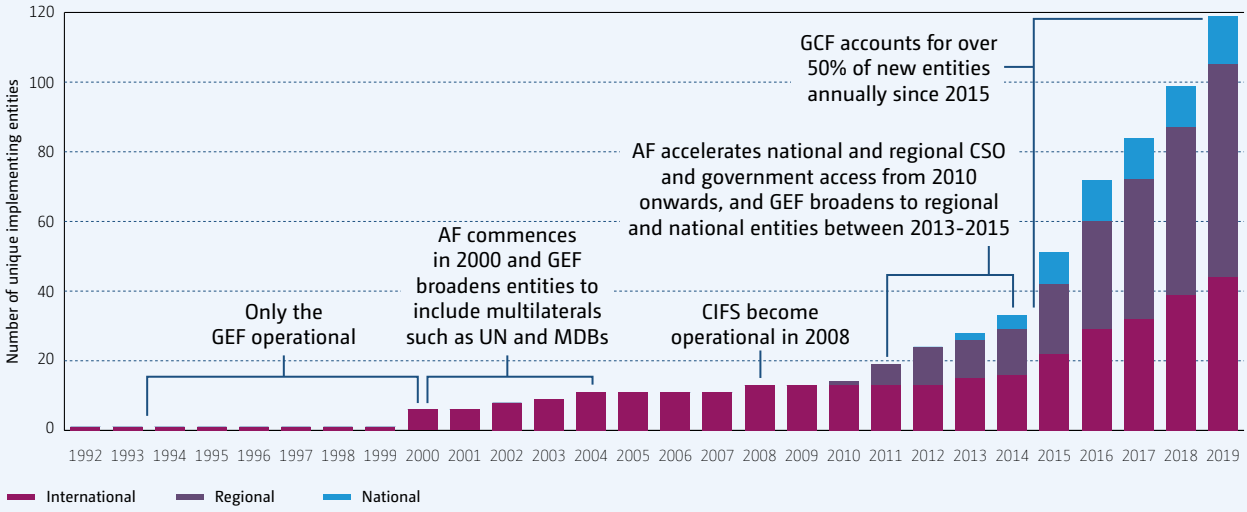
275. At their inception, multilateral climate funds were accessed through international partner institutions such as United Nations agencies and MDBs. Since 2008, there has been a significant push to diversify the modalities of access to climate finance and give institutions based in developing countries "direct access" to international concessional climate finance. Direct access is suggested to ensure that projects are managed directly by developing countries, elevate issues relating to climate changed to the national level, amplify stakeholder voices and help to sustain institutional knowledge (AF, 2017). More practically, direct access can also reduce the transaction costs of climate action (Masullo et al., 2015).

276. In 2017–2018, the number of partners through which developing countries are able to access climate finance from the major multilateral climate funds has continued to grow. In 2020, the number of implementing entities of the major multilateral climate change funds reached 124. Recent growth is particularly prominent in the accreditation of national and regional implementing entities (see figure 3.5.a). Increase is also being seen in non-governmental implementing entities, including the private sector and civil society. These increases are likely to reflect the increasing ability of institutions in developing countries to meet the fiduciary and environmental and social safeguards of multilateral climate funds. This is also in the light of often significant investments that countries and their institutions have made in enhancing processes and institutional capacities.

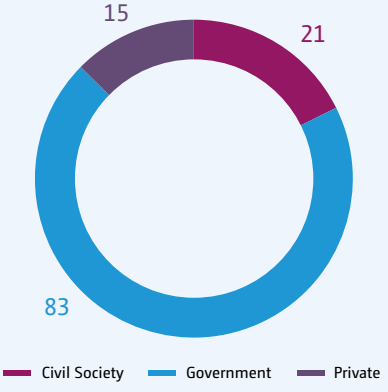
Figure 3.5

Implementing entities of major multilateral climate funds, 1992–2020

3.5a: Implementing entities of major multilateral climate funds by scale, 1992–2020



3.5b: Implementing entities of major multilateral climate funds by sector type, 2019



Source: Based on a review of the reports of the relevant multilateral climate change funds, including: AF, Clean Technology Fund, FIP, GEF, GCF, LDCF, PPCR, SREP and SCCF.

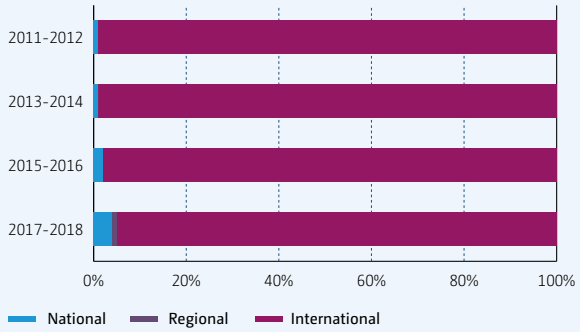
277. The AF has been instrumental in diversifying implementing entities of the multilateral climate change funds through promoting enhanced direct access and simplified approval procedures, including for smaller entities. Much of the acceleration in the accreditation of implementing entities and increase in the share of regional and national implementing entities between 2016 and 2020 has been through the GCF, driven in part by fast-track accreditation procedures for entities already accredited with the other funds such as the AF. The GCF has an accreditation system whereby entities are accredited according to the size of the projects they manage (micro, small, medium or large), their financial activity and the level of environmental and social risk of the projects and programmes that they intend to bring to the GCF.[75] This accreditation system is designed to promote greater efficiency in the accreditation process, though it may need to allow space for upgrading of implementing entities if it is to scale up the finance flowing through national and regional entities. The GCF also has a small number of enhanced direct access projects and more in the pipeline, where developing country based accredited institutions make their own decisions about how to programme resources under an allocation of GCF resources.

278. In 2017–2018, the climate finance approved for implementation via national and regional implementing entities was 7 per cent of total approved finance through the multilateral climate funds operating through accredited entities analysed here. This is a similar amount to the 2015–2016 period (6 per cent of climate finance was approved to national and regional implementing entities). This increases to 11 per cent considering only the UNFCCC funds. Over time, a slow increase is seen in both the number of projects and funds approved to national and regional implementing entities (see figure 3.6) although it remains low compared to the proportion of accredited entities. While there remains a strong rationale for increased programming of climate finance to regional and national level, analysis of the absorptive capacity can be further developed to guide the further development of approved funding.

279. Scaling up the flows channelled through national and regional implementing entities continues to be a desirable but challenging task (DCF Alliance, 2019). It is difficult to track the flow of climate finance to local level, which would require more data transparency on project and programme processes and intermediaries (Soanes et al., 2017), while the capacity of local-level institutions to absorb and programme greater flows of climate finance may also need to be built. Nonetheless, the demand for local-level access to climate finance continues (Restle-Steinert et al., 2019); the LDCs 2050 Vision for a coherent climate finance architecture seeks 70 per cent of climate finance to support local-level action by 2030 (LIFE-AR, 2019).

Figure 3.6

Percentage of climate finance approved from key multilateral climate funds via implementing entity type, 2011–2018



Source: Based on a review of the reports of the relevant multilateral climate change funds, including: AF, Clean Technology Fund, FIP, GEF, GCF, LDCF, PPCR, SREP and SCCF.

The pace and cost of climate finance flowing through the multilateral climate funds

280. Data from the multilateral climate funds can be used to shed light on the efficiency of the climate finance system and its institutions. In particular, the pace and the cost at which climate finance flows to developing countries can be explored.

281. Of the financial pledges made to the major multilateral climate funds, 69 per cent are approved for project activities. This can be compared to 56 per cent at the time of writing the BA 2018 and 80 per cent at the time of writing the BA 2016. The pace at which climate finance moves from pledge to approval through the major multilateral climate change funds, needs to be understood in the light of their different approaches to finance mobilization and delivery, however. The AF accepts pledges on a continuous basis and mobilizes resources annually from national and subnational governments, for example, while the GCF raises funds at specific periods. If the first replenishment of late 2019 is included, which raised USD 9.9 billion, the amount of

75) See the sixth report of the GCF to the COP, contained in document FCCC/CP/2017/5.

pledges approved for projects is reduced to 51 per cent. Furthermore, 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 because of changes in anticipated needs). In contrast, other funds have a pipeline of projects awaiting support; including the LDCF and AF.

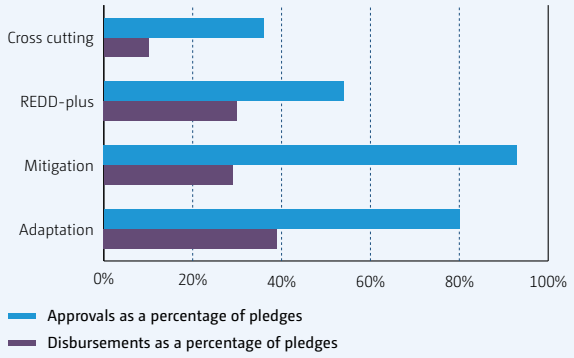
282. Notwithstanding these challenges, funds supporting adaptation approvals as a proportion of pledges stand at 80 per cent (a slight decrease on 84 per cent in 2018). For mitigation-focused funds, approvals as a proportion of pledges stand at 74 per cent (93 per cent for general mitigation focused funds, reducing to 54 per cent for REDD+ dedicated funds), representing an increase in approvals relative to pledges for mitigation. The apparently low degree of project approvals relative to pledges captures the effect of the recent GCF replenishment – as a fund it is considered to support both mitigation and adaptation and therefore here is shown as cross-cutting – with approvals relative to pledges rising to 58 per cent for cross-cutting funds if the GCF first replenishment pledges are excluded (see figure 3.7). The apparently low degree of project approvals relative to pledge amounts reflects a number of considerations such as the complexities of structuring projects so that they meet requirements. In a study covering several multilateral climate funds, Amerasinghe et al. (2017) noted that accreditation of the implementing entity and endorsement of investment plans may take between 10 and 28 months, while the project approval stage may require between 12 and 22 months. Delays can also reflect capacity constraints on the part of beneficiary country counterparts, as well as the competing priorities and incentives of implementing agencies.

283. Reporting on the "life cycle" of climate finance varies significantly across the multilateral climate funds. There is often less transparency on the disbursement of climate finance provided by the multilateral climate funds than there is for approvals. In addition to variability in data, funds may not use the term "disbursement" consistently. Thus, if "no disbursement" is reported, this could mean either that the funds have not been released or that no data are available on whether the funds have been released.

284. It is in the interest of both contributors and beneficiaries of climate finance to maximize the efficiency of the multilateral climate funds by reducing

Figure 3.7

Status of approvals and deposits relative to pledges for the major multilateral climate funds



Source: CFU. 2020.

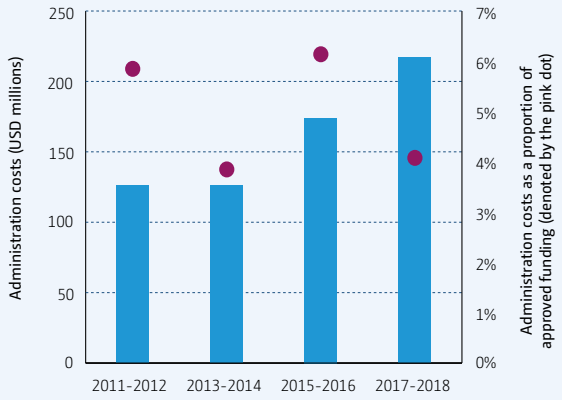
Note: This analysis considers the major multilateral climate funds by the theme they support rather than the actual theme of the projects approved (as such the GCF is considered 'cross-cutting' for the sake of the analysis.

the costs of their operations. Administrative costs refer to the costs of managing the fund as a whole, including board meetings, stakeholder engagement efforts, project screenings and evaluations. In 2017–2018, the major multilateral climate change funds spent USD 217 million on administrative costs. This was an increase on the 2015–2016 period where administration costs were reported to be USD 174 million (figure 3.8). On a fund-by-fund basis, administrative costs vary greatly, as each follows different approaches to project administration in addition to operating via different models. The LDCF and the SCCF, for example, make use of GEF management systems and so have relatively lower administrative costs than other major multilateral climate funds, while the AF has its own legal personality and a high number of national and regional implementing entities.

285. Implementing entity fees cover the costs of intermediary organizations in managing approved projects and programmes. Again, the funds adopt different approaches that make direct comparisons difficult and the level of implementing entity fees measured as a proportion of approved funding varies between 1 per cent to 32 per cent (see also Amerasinghe et al., 2017). In 2017–2018, implementing entity fees of the major multilateral climate funds were reported at USD 231 million. While this represents an increase on the USD 180 million reported in 2015–2016, as a proportion of approved funding, implementing entity fees have declined from 12 per cent to 4 per cent in the 2017–2018 period.

Figure 3.8

Administrative costs for major multilateral climate funds



Source: Based on a review of the reports of the relevant multilateral climate change funds, including: AF, Clean Technology Fund, FIP, GEF, GCF, LDCF, PPCR, SREP and SCCF.

Support for climate finance readiness

286. The capacity of institutions to make strategic choices about how to use finance and oversee the implementation of programmes has long been recognized as important (GIZ, 2013; UNDP, 2012; GCF Readiness Programme, 2017). These issues have been explored at the in-session workshops on long-term climate finance organized by the UNFCCC secretariat in 2017 and 2018. Various layers of capacity are needed to access climate finance at the national level. The adoption of a "whole-of-government approach" to climate finance requires capacity-building for key ministries in countries. Furthermore, the private sector and civil society both need to be engaged in order to rally support for the implementation of climate action projects. The different interests, as well as modes and scales of operation, of these actors have to be taken into account.[76] finance. Almost every multilateral climate fund has a branch of supporting activities with which they support capacity building in developing countries to access and use climate finance. The complex architecture of the multilateral climate funds makes great demands on the capacity of the national institutions involved in accessing the funds (i.e. NDAs and direct access entities), who may need to develop policy frameworks and programmatic approaches that meet the criteria of the multilateral climate funds, in addition to the increasing numbers of related planning processes (e.g. NDCs and NAPs). This is proving challenging for many countries and is resulting in delays and low levels of disbursement.[77]

287. Climate finance readiness – which can be broadly defined as "a country's capacity to plan for, access, and deliver climate finance, as well as monitor and report on expenditures" (GCF Readiness Programme, 2017) – is relevant for the mobilization of all finance sources, including international and domestic public, private and blended[78]

288. The GCF and the AF have both developed readiness programmes. The GCF readiness programme is by far the largest with a budget of USD 190 million for 2015–2018 and USD 368 million for 2019–2021. As at end 2020, the GCF had approved 434 readiness programme requests, covering 138 countries and amounting to USD 284 million.[79] Its readiness programme activities are focused on capacity-building and support for implementing entities and NDAs to strengthen access to climate finance, project preparation and development of strategic climate plans including NAPs (GCF, 2020). The AF has a readiness programme budget of USD 2.4 million for 2015–2018[80] and focuses mainly on knowledge exchange to support accreditation (South–South cooperation) and supporting national implementing entities with project formulation and requirement compliance (AF, 2018). As at end 2020, the AF had approved USD 1.6 million across 36 countries. The GEF has instead incorporated its capacity-building objectives in existing project funding with "enabling activities" supporting developing countries with their climate reporting requirements under the Convention (such as national communications and BURs) (GEF, 2010). In the 2017–2018 period it approved USD 30 million on such projects.[81]

289. Analysis of the GCF readiness programme between 2015 and 2018 suggests that 45 per cent of funding is directed to NAP development, 40 per cent to capacity-building and support for implementing entities and 15 per cent to develop strategic frameworks (GCF, 2020).

76) See document FCCC/CP/2017/4 and also https://unfccc.int/topics/climate-finance/workstreams/long-term-climate-finance-ltf.

77) "Blended finance" is the strategic use of public or private funds, including concessional tools, to mobilize additional capital flows (public and/or private) to emerging and frontier markets. It is one approach that has the potential to attract new sources of funding to address the biggest global challenges. See http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/blended-finance.htm.

78) See document FCCC/CP/2017/4 and also https://unfccc.int/topics/climate-finance/workstreams/long-term-climate-finance-ltf.

79) Available at https://www.greenclimate.fund/readiness.

80) See documents FCCC/KP/CMP/2015/2, FCCC/KP/CMP/2016/2, FCCC/KP/CMP/2017/6 and FCCC/KP/CMP/2018/4.

81) Based on own analysis of enabling activities (p.75) see GEF Board document GEF/C.55/Inf.XX, available at https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.55.Inf_.XX_UNFCCC_CoP_Report.pdf.

Analysis of the AF readiness activities indicates that funding between 2014 and 2019 has predominantly been programmed to support accreditation (60 per cent) in the form of South–South cooperation, 33 per cent to support national implementing entities with requirement compliance and 7 per cent to support capacity-building of national implementing entities. While the AF only supports national implementing entities with their readiness programme, most GCF readiness support (60 per cent) is channelled through multilateral delivery partners.

290. Concerns have been raised that global readiness efforts were preparing countries to access particular funds, rather than climate finance more broadly (Amerasinghe et al., 2017). The AF notes that while the readiness programme has enabled an increase in accreditation of national implementing entities, it is unable to assess if project approvals of national implementing entities have increased concurrently. Both the AF and GCF evaluations of readiness activities have further signalled the need for a broader focus on climate finance access rather than access to the funds themselves and for complementarity between readiness programmes (AF, 2018).[82] Together, the three reviews of the GCF readiness programme have triggered the development of a more outcome-based approach that works towards more sustainable, long-term impact. In practice, this will mean that countries will have greater flexibility in the deployment of readiness resources, though it will be programmed with specific results targets to improve its effectiveness that encompass the strategic vision for the GCF readiness programme.[83]

291. The UNFCCC RCC have continued to expand their work to support implementation of the NDCs and capacity-building (UNFCCC, 2020). Launched in 2013, collaborations are established between the UNFCCC and regional host partners, local and regional agencies and MDBs. Initially launched to support CDM project development, their support is now broader, including the means of implementation and support for countries' NDCs. RCCs are supporting the implementation of the Needs-based Finance Project for example, whose objective is to facilitate access to and mobilization of climate finance for the implementation of priority mitigation and adaptation projects to address the needs identified by developing countries.[84]

292. Outside of the formal UNFCCC process there are further initiatives that support aspects of climate finance readiness. The NDC Partnership, for example, works with a diversity of actors to support alignment, coordination and access to resources for climate and development action.[85] It was found that climate finance is the most frequently requested area of support among NDC Partnership countries and pillars of support are being built around developing climate finance strategies and road maps; integrating NDCs into national planning budgets and revenue; project and programme financing and resource mobilization; developing bankable projects and pipelines; and private sector engagement, whereby members provide technical support and services in response to these needs (NDCP, 2020). Other ongoing initiatives that are focused on the delivery of climate finance include the Global Innovation Lab for Climate Finance and Climate-KIC, both of which broadly seek to bring together different stakeholder communities to innovate and accelerate climate finance.

3.3.2 Ownership

293. In the context of climate finance, ownership often refers to the active engagement of stakeholders from ministries and other governmental bodies, as well as from the private sector and civil society. It also refers to the use of, or close links between climate finance and national development and climate policies as well as national systems for spending and tracking climate finance.

294. Globally, increasing engagement with climate change can be observed in the ministries responsible for strategic investment and financial management decisions at the national level (e.g. ministry of finance, treasury and ministry of national planning). The government's engagement in climate finance often manifests itself in the articulation of climate change in the national development agenda and the development of climate change policies, legislative frameworks and strategies, which are evolving rapidly: there are already over 1,860 climate change-relevant laws worldwide.[86]

295. The multilateral climate funds continue to encourage country ownership in their programming. Funds may require a letter of no objection from

82) See GCF Board document GCF/B.22/08, paragraph 35.
83) See GCF Board document GCF/B.22/08.
84) See https://unfccc.int/topics/climate-finance/workstreams/needs-based-finance-nbf-project/background-information#eq-4.
85) See http://ndcpartnership.org/.
86) Climate Change Laws of the World database, Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law. Available at www.climate-laws.org

designated national authorities and some also support broader climate planning policy and processes. The LDCF, for example, has long supported NAPAs and now supports NAPs, which are longer term and are even more integrated into national planning processes with enhanced potential for national ownership of adaptation actions. The multilateral climate funds are also accrediting more diverse entities: for example, in 2019 the GCF accredited JS Bank Limited, a private sector entity headquartered in Pakistan providing microfinance, project finance and commercial banking nationally, and Finanzas y Negocios Servicios Financieros Limitada in Chile, that promotes financial and commercial advisory services. MDBs and bilateral contributors often also have country partnerships and strategy documents, updated periodically, in order to facilitate country ownership.

296. Engagement of the private sector and civil society often has to do with their meaningful role in developing national climate change policies and strategies. It also applies to their engagement in both the conceptualization and implementation of proposed approaches and investments. A growing number of non-State national-level institutions in various countries are seeking to play a more prominent role in managing climate finance (UNDP, 2011). Some of these institutions have applied for accreditation as implementing entities to the multilateral climate funds, while others focus on mobilizing domestic capital for immediate deployment to national adaptation and mitigation activities (such as national climate change funds).

Alignment of climate finance with investment needs and plans, including in the context of nationally determined contributions and national adaptation plans

297. Channelling climate finance so that it supports climate change policies and strategies drawn up by national governments can generally lead to better results. It allows for more cohesive planning processes for climate change action across the many arms of government, also in conjunction with other governmental economic and development priorities (Bird et al., 2016). The importance of supporting such national priorities, as well as national institutions, is enshrined in the principles for ensuring the effectiveness of international assistance for developing countries.

298. Previous BAs have summarized efforts to complete national climate finance needs assessments. This includes through initiatives such as UNDP and the UNFCCC, as well as through UNFCCC-supported processes, such as TNAs, NAPAs, NAMAs, BURs and NDCs. These reviews find that the incompleteness of data from both the top-down and bottom-up estimation challenges assessment of the alignment of climate finance flows with the climate finance needs of developing countries.

299. The SCF report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement finds that needs range across all means of implementation (finance, capacity-building and technological transfers). While more needs are expressed for adaptation, costed needs are dominated by mitigation, largely in the energy sector, while for adaptation, the agriculture and water sectors dominate financial needs. The report finds, however, that the methodologies used to determine financial needs vary in terms of costs, time frames and assumptions, with costs per activity presented in some cases, while in others there are cost estimations by sector.[87]

300. Ongoing improvement methodologies and a standardized presentation of financial needs in NDCs, or associated with other planning processes, could aid forward movement by ensuring that needs are matched by existing and potential financing support and technical and policy support.[88] Needs assessments could also support alignment with broader sustainable development finance flows and strategies, not least in the context of INFFs and development finance assessments in the context of helping countries to achieve the SDGs (Martínez-Solimán, 2017).

National systems for tracking and spending climate finance

301. A number of countries have explored the degree to which their budget expenditure is climate related (section 1.2.3 and 2.3). This has historically focused on identifying positive climate spending and incentives for such spending (UNDP, 2019). More recent emphasis highlights the importance of linking such efforts to future budgeting and prioritization of government expenditures. The Coalition of Finance Ministers for Climate Action identified in Uganda how improved cross-ministerial working has led to the discussion of climate change as a fiscal risk in the annual budget framework paper, while in Jamaica, the Ministry of Finance and Public Service developed, from an assessment of the budgetary framework for disaster response, a strategy that supports the country to deal with contingent liabilities in the event of natural disasters. The Coalition

87) See https://unfccc.int/documents/307595

88) See, for example the NDC funding and initiatives navigator tool, used to match countries' expressed needs and activities with financial and technical support, at http://ndcpartnership.org/initiatives-navigator.

paper also identifies the need to develop NDCs in close collaboration with ministries of finance, that could ultimately support the NDCs to be fiscally sound, with macroeconomic factors and wider financial and private sector implications well considered. Such is the case in Chile where there is a strong macroeconomic underpinning of emission targets (Coalition of Finance Ministers for Climate Action, 2020a).

302. National institutions and mechanisms to track climate finance more broadly have also been established as discussed in section 1.2.3. The BA 2018 identified Colombia, Fiji, Bangladesh, India and Nepal as some of the countries that have established national-level institutions and mechanisms to track climate finance. The Philippines has also developed a National Integrated Climate Change Database Information and Exchange System, consolidating information on climate change and climate finance flows (NICCDIES, 2020). With greater ownership by national institutions come obligations related to responsibility and accountability, which need to be fulfilled too in order to ensure that the funds achieve maximum impact. In Ireland, climate change expenditure tracking is being developed to include impact analysis (Coalition of Finance Ministers for Climate Action, 2020a). A methodology has also been developed in France in order to assess whether an expenditure of the central government is favourable or unfavourable to climate protection and adaptation, biodiversity, pollution, resource use and waste, to be implemented in 2021.

303. The ability of domestic financial systems to absorb – and then spend – international climate finance has been another focus of efforts towards ownership. On the one hand, this can refer to the channelling of international climate finance through national budgeting and financial management systems, through direct budget support. While this is a tested and proven form of support, it also comes with challenges in assessing impact. On the other hand, it refers to the creation of new institutions such as national climate funds (UNDP, 2011).

304. The LoCAL facility under the UN Capital Development Fund is an example of an initiative supporting domestic national budget systems to target adaptation actions at the local level, while reinforcing transparency and reporting through those systems. The facility supports countries in piloting and establishing performance-based climate resilience grant systems to channel climate finance and improve local responses to climate change. The grants provide a financial top-up to cover the additional costs of making investments climate resilient and are channelled through existing government fiscal transfer systems rather than parallel or ad hoc structures. This incentivizes local governments to develop and integrate targeted adaptation measures while increasing transparency and accountability by enabling verification of climate change expenditures at the local level. It further reinforces existing national and subnational financial and fiscal delivery systems, and it uses the demonstration effect to trigger further flows for local adaptation – including national fiscal transfers and climate finance for local authorities – through their central governments. As at May 2020, LoCAL had engaged with 293 local governments, representing over 11 million people in 14 countries, mobilizing USD 92.8 million from grants of USD 14.2 million.[89]

305. National climate change funds attracted early interest as they largely have independent governance structures. While these funds have raised modest sums so far, they have the potential to rapidly channel domestic and international climate finance to projects in a way that understands and prioritizes national circumstances (CFU, 2020). There are now in existence a number of national climate change funds. While growing examples of national climate change funds provide learning opportunities, they also highlight diversity in capitalization and operation. Ethiopia's CRGE Facility, launched in 2013, while capable of programming national, public and private financing, so far predominantly channels international resources (Ethiopia Ministry of Environment and Forest, 2014). Namibia's Environmental Investment Fund was officially launched in 2012, though incepted much earlier, to provide a sustainable source of domestic funding for natural resource management, green technology and low-carbon development; it also became one of the first national entities to have been accredited by the GCF.[90] FONERWA was seed funded by the government and is also now an accredited entity of the GCF (FONERWA, 2019). The People's Survival Fund of the Philippines, established in 2012, has guaranteed funds through national appropriations (to ensure its independence and national ownership), but it is also open to international

89) The 14 countries are Bangladesh, Benin, Bhutan, Cambodia, Gambia, Ghana, Lao People's Democratic Republic, Lesotho, Mali, Mozambique, Nepal, Niger, Tuvalu and United Republic of Tanzania. Those expressing interest in the initiative include Burkina Faso, Côte d'Ivoire, Liberia, Malawi, Pakistan, Palestine, Sao Tome and Príncipe, Senegal, Solomon Islands, Sudan and Uganda.

90) See https://www.eif.org.na.

contributors.[91] The Brazilian National Fund on Climate Change, established in 2009, is financed mainly by revenues from a tax on oil companies, with the Fund supporting national efforts to build resilience to climate change and reduce emissions from the forestry, energy and infrastructure sectors.[92]

3.3.3 The impact of climate finance: selected insights and experience

306. Impact reporting systems and practices for climate finance are maturing, including increased transparency and more regular reporting in more standardized formats. They allow experience to be learned from and, where appropriate, scaled up and out, as well as a continuous improvement of ongoing projects and programmes.

307. The use of impact metrics and indicators may be particularly relevant for implementation of the enhanced transparency framework under the Paris Agreement. As mentioned in section 1.3, at COP 24 in Katowice, Parties to the Paris Agreement agreed on modalities, procedures and guidelines for the reporting on finance, technology and capacity-building support provided and mobilized, as well as support needed and received under the enhanced transparency framework. In reporting on finance received, developing country Parties may report information on the *use, impact and estimated results* of the financial support received in the CTFs which will be developed under the SBSTA. Similarly, in reporting on financial support needed, developing country Parties may report information on *expected use, impact and estimated results*.

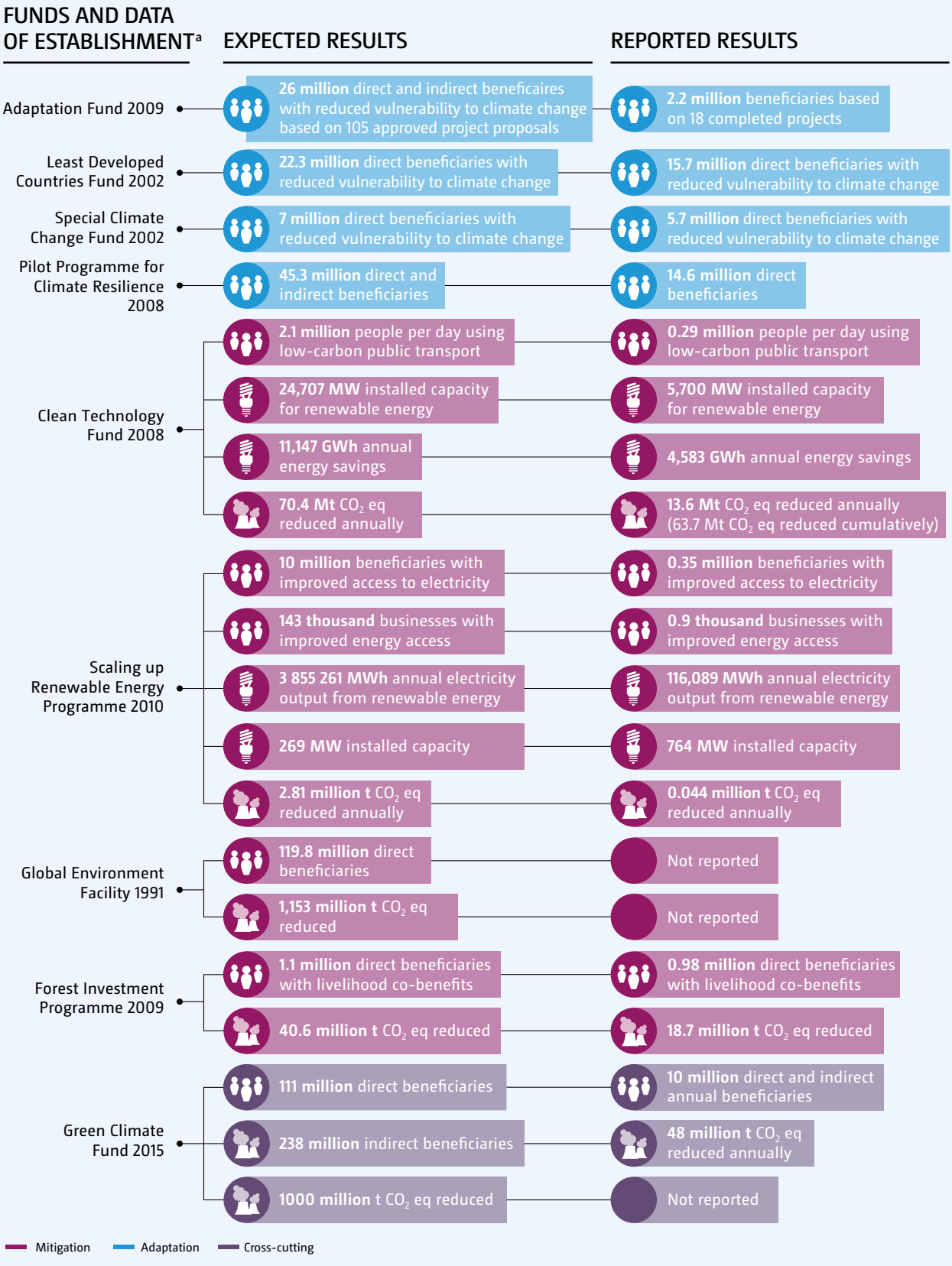
308. There still remains no agreed standard by which to measure the results and impact of climate finance (see section 1.6 in chapter 1). The MDBs and IDFC do not include information on mitigation and adaptation outcomes in their joint reports and bilateral contributors have variable approaches to reporting on impacts. However, the multilateral climate funds have continued making progress on impact reporting, including by developing results frameworks which will support the ability of funds to measure and report on the impacts of their investments. The results reported from the funds provide useful insight into climate finance effectiveness. Figure 3.9 illustrates a selection of expected and reported results from these funds, the commonalities and divergences in the status of reporting, and the indicators used (see annex G for an elaboration of these results).

91) See https://psf.climate.gov.ph/about/.

92) See https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Social_and_Environmental_Responsibility/climate_fund_program.html.

Figure 3.9

Selection of actual and expected results of multilateral climate funds



a. Results are not prorated based on the pledge size of the funds.

Source: Based on a review of the reports of the relevant multilateral climate funds (see annex G).

Impact of mitigation finance: selected experiences from the multilateral climate change funds

309. GHG emissions remain the primary metric to show impact or results when it comes to climate finance for mitigation. Complementary metrics include those that are sector-specific (e.g. for electricity, transport or industrial activities) or focused on the amount of clean energy installed and annual energy savings (for example in megawatts). Figure 3.9 summarizes the results reported by mitigation-focused multilateral climate funds, evidencing the focus on emission reductions and energy access where most funds are now reporting on progress towards expected results. The Clean Technology Fund, SREP and FIP have reached 1.62 million beneficiaries out of an expected 13.2 million; more than a doubling since the BA 2018 of reported reached beneficiaries and a slight increase in number of expected beneficiaries. The GEF and GCF reported 231 and 238 million expected beneficiaries respectively; however, they did not report on the number of beneficiaries reached. With regard to the GHG emission reductions, the CTF and SREP reported an annual 13.64 Mt CO_2 eq reduction out of an expected annual 73.2 Mt CO_2 eq reduction, whereas the FIP, CTF, GCF and GEF reported a cumulative reduction of 130.4 Mt CO_2 eq out of an expected 2,264.4 Mt CO_2 eq. In addition, gains in installed renewable energy capacity and annual energy savings are also reported by a few funds (although measured in different units, which reduces comparability).

310. Multilateral climate funds supporting REDD+ have historically sought to support the strengthening of national policies and policy alignment to facilitate forest conservation and emission reductions. Such REDD+ readiness is hard to measure. Ultimately, REDD+ funds are intended to deliver emission reductions, and multilateral funds supporting REDD+ often report on avoided GHG emissions, the enhancement of carbon stocks in forests and the hectares of land or forest under sustainable management. Projects of the CIF FIP can also report on co-benefits such as environmental services, livelihoods or capacities built. Results and impact from REDD+ finance both take time to be accurately measured and face the possibility of reversals, also called issues of permanence. FIP, however, reports reaching 0.98 million direct beneficiaries out of an expected 1.1 million with emission reductions reaching 18.7 Mt CO_2 eq out of an expected 40.6 Mt CO_2 eq.

Impact of adaptation finance: selected experiences from the multilateral climate change funds

311. There is no singularly accepted impact metric for adaptation-focused climate finance. This, in part, reflects the broad suite of sectors and approaches that are part of adaptation efforts. Conventional development interventions, including those supporting sustainable livelihoods or social protection, can strengthen resilience and adaptive capacity, making it difficult to distinguish between good development and adaptation activities (Levine, Ludi and Jones, 2011; Fankhauser and Burton, 2011; Jones et al., 2012). The timescale and frequency over which the multiple impacts of climate change will materialize further complicate the creation of common impact metrics for adaptation. It will be difficult, for example, to measure the beneficiaries of an intervention to reduce the impact of a slow-onset event that will occur over many years, likely after the intervention has ended. Similarly, building resilience to 1-in-100-year extreme weather events can prove problematic to verify beneficiaries in the high likelihood the event happens outside the timespan of the intervention.

312. Efforts to improve the understanding of adaptation impact are often based on the resilience-building lens. Tracking resilience is challenging, and methodologies range from composite indices based on objective indicators (Tanner et al., 2015) to subjective measures of risk perception (Jones and Tanner, 2015). It remains difficult to compare results and impacts when definitions of what it means to be more resilient are heavily dependent on the context in which it is taking place (including for example, various institutional settings) (Quevedo et al., 2019). The perspectives for measuring and comparing adaptation outputs also differ between actors; thus, as work on adaptation metrics continues, it will be important to capture results that are important to a diversity of actors (Christiansen, Martinez and Naswa, 2018).

313. Subsequently, multilateral climate funds supporting adaptation capture diverse results areas. Many have tended to focus on the number of beneficiaries of an intervention, directly or indirectly. Yet monitoring beneficiaries accurately is a challenge and hard to verify. Alternatively, funds have output-based metrics such as the number of early warning systems put in place. Funds such as the LDCF and AF also track the number of vulnerability and risk assessments completed or the number of people trained in issue areas related to climate impacts and adaptation. Figure 3.9 summarizes the adaptation results reported by adaptation-focused multilateral climate funds, illustrating the dominance of metrics on beneficiaries. Together the AF, GCF, LDCF, PPCR and SCCF report close to 46 million beneficiaries out of 450 million expected beneficiaries: a doubling of reported beneficiaries since the BA 2018.

Mobilizing additional climate finance flows

314. Climate finance providers can use mobilization of further finance as a measure of impact. Attracting more investment, both public and private, into low-emission, climate-resilient approaches is necessary to meet the scale of climate finance needed. The methods applied and the availability of data on the mobilization of further finance varies across sources and institutions of climate finance, however. A key challenge is definitional, with co-financing leverage and private sector leveraging both distinctly different but often conflated (De Nevers, 2017). Differences in the methods applied instead complicate comparability between institutions, with differences found in the scope of the application of the method (such as the instruments included and underlying formulas), as well as in the differentiation of direct and indirect mobilization (see section 1.2.2)

315. Major multilateral climate change funds have focused on private finance outcomes largely calculated using leverage ratios. It is notable that while the CTF and GEF have a mandate to mobilize private climate finance, the AF does not, and while the GCF has a separate private sector facility, it does not yet report leverage ratios. The CIF's overall co-financing (of public and private sources) ratio is expected at 1:9, and the private sector co-financing ratio as 1:2.9. The highest co-financing ratios are found in the Clean Technology Fund, followed by the Scaling Up Renewable Energy Fund, both of which finance predominantly infrastructure (CIF, 2020). The overall ratio of the CIFs is on par with the GEF co-financing ratio of 1:8.5, though the GEF does not distinguish between private and public co-financing (GEF, 2019a). With no harmonized methodologies for estimating private climate finance from the funds these results are not directly comparable.

316. Current methods to understand the mobilization of co-finance remain narrow. Approaches are unable to capture the mobilization effect of capacity-building, budgetary support or domestic policies, for example. There remain long-standing concerns that high ratios of both co-financing and leverage may suggest that highly concessional public finance was not required in the first instance (Brown et al., 2011; Stadelmann et al., 2013). This might be because these are the lowest-risk investments for the private sector (i.e. investments that were potentially commercially viable without public support). Methods are also unable to capture the effect of the overarching in-country investment climate, shaped by its policies and regulations, that will influence the role that other forms of finance, particularly private sector finance, can play in climate action.

Measuring transformational change

317. The impact and results of funds often go beyond reported metrics as discussed above. Monitoring and evaluation systems rarely capture the wider impacts of policy change and capacity-building, or the demonstrative impact of projects or efforts of the multilateral climate funds to support knowledge-building and dissemination. The concept of transformational change captures some of these effects and is one embedded within many major multilateral climate change funds and climate projects and programmes.

318. Transformational change is hard to define. It has been understood to capture significant scaling up and replication to enable a faster shift from one state to another, a catalytic effect through mechanisms such as national ownership and political will, private sector involvement and innovative technology application, and systematic learning processes (NAMA Facility, 2014). The Transformational Change Learning Partnership (TCLP), a product of the CIF Evaluation and Learning Initiative bringing together the GCF, GEF, NAMA Facility and other climate finance initiatives and actors, created a working definition of transformation as the "strategic changes in targeted markets and other systems with large-scale, sustainable impacts that accelerate or shift the trajectory toward low-carbon and climate- resilient development" (ITAD, 2020).

319. Lacking detailed definitions of transformational change, it is hard to measure and assess. The Independent Evaluation Unit of the GCF found that there are technologies and methods to better understand what transformational change might entail, but further strategic thinking is needed to further develop the concept (Puri, 2018). As such, and because the concept depends on the specific context in which it is employed, proxy indicators are often used to assess the likelihood of transformational change, such as in the United Kingdom key performance indicator on transformational change (UK ICF, 2018). An independent evaluation of transformational change, commissioned by the TCLP, found evidence that transformational change processes are under way in CIF programmes (including the CTF, PPCR, SREP and FIP), though there is less evidence of transformational change actually being delivered. While evidence suggests the CTF has supported the shift toward non-concessional market-based approaches for low-carbon energy and the FIP has supported shifts in stakeholder behaviours, knowledge and capacity for resilience and forest programming, evidence of potential transformation is more challenging to find in less developed country contexts and in thematic areas with strong socioeconomic linkages (ITAD, 2019).

Gender and climate finance

320. The Cancun Agreements reached in 2010 acknowledged that gender equality and the effective participation of women are critical in climate change action.[93] Subsequent COP decisions established the Lima Work Programme on Gender and enhanced the way in which gender issues are addressed under the UNFCCC process. The Gender Action Plan approved at COP 23 in Bonn set UNFCCC-wide priority targets to be achieved by 2020, notably with regard to the use of gender responsive- finance as a core tool for implementation. At COP 25 in Madrid, Parties adopted the *enhanced* Lima Work Programme on Gender and Gender Action Plan, to run for five years.[94] It not only aims for gender-appropriate governance in the UNFCCC itself, but also the integration of a gender-responsive approach to implementing the Paris Agreement and in monitoring and reporting on results. This acknowledges the continuing need for gender mainstreaming through all relevant targets and goals in activities under the Convention as an important contribution to increasing their effectiveness, fairness and sustainability.

321. Evidence suggests that public finance that is gender-responsive is both more effective and efficient (World Bank, 2012b; Habtezion, 2016). Thus, gender-responsive public finance is able to take into account the gender dynamics of food production, procurement and distribution, for example, or the different needs of men and women as users of mass urban transport in terms of affordability, trip length, frequency and security (CIF, 2014).

322. The mainstreaming of gender considerations in the governance and operations of multilateral climate change funds has been improving. The GCF has had gender issues mainstreamed into its core operational policies since before it became fully operational in November 2015.[95] The GCF requires implementing entities to have their own gender policies or action plans in place and to consider the gender impacts of funding proposals systematically. In late 2019, the GCF adopted a revised gender policy and new gender action plan (2020–2023), in particular increasing capacity-building support for gender considerations to be made (GCF, 2020b). In September 2017, 67 per cent of GCF-approved funding proposals included a project-level gender and social inclusion action plan. In early 2020, 80 per cent of GCF-approved projects had a gender action plan listed on the GCF website (ECBI, 2020). The 2018 GCF Annual Portfolio Report notes that many accredited entities did not comply with requests to report against their submitted gender action plans, however.[96] While the 2019 GCF Annual Portfolio Report notes that mature projects should review and refine their gender assessment and gender action plans, as "living documents" to increase clarity of targets and indicators.[97] Last but not least, the 9th report of the GCF to the COP highlights that all GCF funding proposals approved in 2019 and 2020 contain gender assessments and gender action plans, including gender-disaggregated data. The purpose of gender assessment is to inform project formulation, implementation, and monitoring and evaluation, while the purpose of the gender action plan is to ensure that the challenges faced by women and vulnerable groups in accessing and benefiting from projects and programmes financed by the GCF are addressed through designated actions.[98]

The AF now considers gender equality as part of its mission, as identified in its Medium-Term Strategy for the years 2018–2022. This comes on top of the AF Gender Policy and Action Plan, adopted in March 2016, and additional guidance to AF accredited entities in 2017 on how to improve the gender responsiveness of projects and programmes supported by the Fund (AF, 2016). In 2019, the AF developed an assessment report on progress in the implementation of the Gender Policy and Action Plan (GP and GAP), which suggests that the AF has made substantial progress (AF, 2019). The AF has also been working on an updated GP and GAP in a transparent manner, including by conducting an independent overall assessment in 2019, launching two rounds of public calls for comments in 2019–2020 and 2020–2021, and, based on all the inputs received, the final proposal was prepared in February 2021 and approved by the Board in March 2021 (AF, 2021).

323. The GEF, also responsible for the SCCF and LDCF, adopted a Policy on Gender Equality in 2011, revised in November 2017, requiring all GEF implementing agencies (mostly MDBs and United Nations agencies) to be assessed

93) Decision 1/CP.16, paragraph 7. Parties additionally confirmed the need for gender balance in the composition of UNFCCC bodies dealing with climate finance in Durban and reiterated this in Doha (decision 23/CP.18) and Lima (decision 18/CP.20).

94) Decision 3/CP.25

95) See GCF Board document GCF/B.09/23 Annex XIII and XIV.

96) See GCF Board document GCF/B.24/Inf.04.

97) See GCF Board document GCF/B.27/Inf.04.

98) See GCF Board document GCF/B.27/17.

Table 3.2

Expected results from projects and programmes approved by the GEF in the reporting period

Type of projects and programs	Total GHG emission reductions (Mt CO_2eq)	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investement		
		Female	Male	Total
Technology Transfer/Innovative LCTs	10.3	4,279	7,946	12,225
Energy Efficiency	45.4	1,037,760	1,042,040	2,079,800
Renewable Energy	26.2	998,025	906,525	1,904,550
Urban/Transport	214.5	28,879,767	31,156,517	60,036,284
AFOLU	114.3	1,944,610	1,931,775	3,876,385
Mixed/others	20.3	1,240,913	1,261,687	2,502,600
SGP	0.4	14,500	14,500	29,000
Total	**431.4**	**34,119,854**	**36,320,990**	**70,440,844**

Source: (GEF, 2020).

for their compliance with gender mainstreaming as a requirement for accreditation (GEF, 2018). A 2017 analysis found that only 5 per cent of climate change projects demonstrated successful gender integration. Under the new policy, project proposals are to include a gender or socioeconomic analysis, gender-responsive measures and gender-sensitive indicators (ECBI, 2020). The GEF also approved a Gender Equality Action Plan in 2015 and created a Gender Implementation Strategy in 2018.[99] GEF implementing entities are required to demonstrate that they have taken gender into account during project design and to establish policies and strategies for gender mainstreaming, notably through the measurement of gender impacts.

324. The UNFCCC multilateral climate change funds have a mandate under decision 21/CP.22 to include in their respective annual reports to the COP information on the integration of gender considerations in all aspects of their work. Gender-specific efforts and gender-disaggregated impact results are not consistently available at the fund portfolio level, however. The AF does identify beneficiaries trained in climate change resilience through livelihood diversification: women made up 49,279 of a total of 97,671 beneficiaries (specifically by region it is 17,385 from Africa, 16,004 from Latin America and the Caribbean, 15,075 from Asia-Pacific and 816 from Eastern Europe).[100] The GEF secretariat has been promoting its Open Online Course on Gender and Environment by including it in various events and workshops such as COP 25, which resulted in issuing over 2,000 certificates. The GEF also reports that between July 2019 and 30 June 2020 the estimated total number of direct beneficiaries through approved projects and programmes amounted to 70,440,844, almost half of which (34,119,854) were female beneficiaries (Table 3.2).

325. The CIFs and the MDBs implementing the CIFs have gender policies for their development financing operations. A 2013 CIF review confirmed that more was needed to systematically consider gender and the CIF Gender Policy was last revised in 2018 (CIF, 2018). This increased gender staff at the CIF administrative unit and mandated improvement in the gender requirements in investment plan preparations, review and submission procedures, and accountability measures (Schalatek,

99) See GEF Council document GEF/C.54/06.

100) See AFB/EFC.25/3/Rev.1 Annual Performance Report for the Fiscal Year 2019. Available at https://www.adaptation-fund.org/wp-content/uploads/2019/10/AFB.EFC_.25.3.Rev_.1-Annual-Performance-Report-for-FY19.pdf.

2019). All but the CTF now include some gender indicators in their technical review of investment programmes, while all CIFs encourage at least some sex-disaggregated results reporting, although to a varying extent.[101] The PPCR Monitoring and Reporting toolkit on gender and learning has also been extended to MDBs and country representatives through CIF-organized events, such as Pilot Country Meetings, that can support capacity-building.[102]

326. Although advances in existing multilateral climate funds have been made, there remains little on best practice for gender-responsiveness in funding climate action. This considers both how, but also what they will fund (Schalatek, 2019). While the multilateral climate funds are now expecting integration of gender considerations into project consideration and approval (quality-at-entry), there are weaknesses in the monitoring and reporting of quantitative and qualitative gender efforts and outcomes in implementation at project level and in aggregating gender-specific impacts at portfolio level (quality-in-implementation) (HBS, 2020). The AF 2019 assessment of progress in implementing the gender mandate highlighted the need for more capacity support for implementing entities (AF, 2019). A 2020 assessment of the enabling conditions for effective and inclusive engagement of women and gender-related stakeholders in the CIFs highlighted the need for national institutional developments to mainstream gender, increased engagement of women and gender-related groups in CIF governance and interventions and strengthened guidance for monitoring and reporting (WEDO, 2020). Continuation of recent collaborative efforts and expert exchange between multilateral climate change funds could strengthen gender integration efforts. This could focus on highlighting best practice projects or procedures (for example certain funding approaches that are more likely to reach and support women more directly, such as small grant approaches and other forms of devolved financing, or targeted private sector support for MSMEs with women entrepreneurs overrepresented in the micro and small segment), as well as on efforts to increase transparency and address persistent reporting gaps (HBS, 2020).

327. Gender considerations must be made throughout climate finance decision-making, not just in the multilateral climate funds and MDBs, nor only by public actors. As highlighted in chapter 1, OECD DAC members can mark commitments as targeting both climate and gender-equality. In 2017–2018, 54 per cent of concessional climate-related, bilateral development finance from OECD DAC donors was also marked as acting in support of gender equality. While this is an increase of 41 per cent marked as also acting in support of gender equality compared with the 2015–2016 period, the amount of development finance targeting gender equality as a principal objective has been consistent at around 2–3 per cent since 2011–2012. The majority of gender-marked, climate-related concessional development assistance (from OECD DAC members) has gender equality as a significant objective, not as a principal objective. The OECD DAC marker shows an intention towards gender equality and is not an exact quantification nor is it a tracking tool.

3.3.4 Consideration of the drivers for climate finance

328. The drivers of climate finance flows can consist of both demand- and supply-side actions but may differ in terms of mitigation or adaptation objectives. Globally, across mitigation solutions, policy targets and support mechanisms have played a major role in driving climate finance flows. In renewable energy, 166 countries have national targets for power generation from renewables (REN21, 2020). Many of these countries enacted fixed long-term prices in the early 2010s to enable the financing of projects that acted as a key demand-side driver. As falling technology costs have driven finance flows on the supply side in recent years (as noted in section 2.2), such demand-side incentives are replaced by market-based auctions. In 2019, half of new renewable capacity was derived through auctions (FS-UNEP, 2020). Other mitigation sectors, however, continue to rely on policy drivers to scale up finance flows such as in the transport sector with purchasing incentives for EVs providing short-term support to the demand side and bans on the sale of new internal combustion engines in the long term (REN21, 2020).

329. In adaptation, lack of data on finance flows (see section 2.2) as well as a relative lack of solutions that generate cash flows limits the role of private finance and understanding of existing drivers (GCA, 2019). More literature is known on the barriers to investment in adaptation and resilience over what drivers exist on current flows, with a consensus to focus on greater data on pricing climate risks and mainstreaming adaptation

101) See: FIP operational and results report (2020); PPCR operational and results report (2020); SREP operational and results report (2020)
102) Available at https://www.climateinvestmentfunds.org/sites/cif_enc/files/ppcr_results_reports_2020.pdf.

and resilience planning within financial decision-making. As adaptation finance decisions are focused on local, context-specific conditions, many existing finance flows are driven through domestic public expenditure policies and priorities, such as earmarking tax revenues to be spent on adaptation, reallocating subsidies or raising finance through green bonds (GCA, 2019, NAP Global Network, 2016). In this regard, the role of national plans, standards and institutions taking active roles takes on more importance in driving adaptation finance flows than may be the case in mitigation finance. Both the Philippines and Kenya have been highlighted as key examples in driving the integration of climate vulnerabilities and resilience measures in national- and local-level planning (GCA and CPI, 2021). Building codes, design standards and disaster risk management guidelines play a role in furthering climate resilience within infrastructure and development investments. Furthermore, local and context-specific vulnerabilities require local-level data and information systems on risks to drive investment, particularly in agricultural adaptation activities (CFLI, 2021).

330. In the specific context of driving international flows of climate finance to developing countries, a key supply-side driver includes multi-annual commitments and budgetary agreements on allocating climate finance budgets over several years. This serves to ringfence certain annual allocations to climate funds and budgets such as in the United Kingdom and Belgium, integrate climate considerations into aid management guidelines such as in Denmark, or establish mandatory spending lines in annual budgets legislation such as in the United States.[103] In addition, target setting on climate finance commitments by development finance institutions and MDBs has driven a significant upscale in climate finance flows. Since setting 2020 climate finance targets during COP 21 in 2015, MDBs have increased climate finance flows to developing and emerging economies by 85 per cent by 2019 (USD 25.1 billion to USD 46.4 billion) (AfDB et al, 2020).

331. As described in section 3.3.2, activities that demonstrate country ownership and political support for climate action are significant demand-side drivers to support international climate finance. The development of detailed national and sector-specific plans and support mechanisms, as well as activities such as national climate finance tracking and public expenditure targeting, are identified as key activities supportive of driving international climate finance in a study of 12 case studies (SNAPFI, 2020). While private sector climate finance thrives on sector-specific support mechanisms identified above, cross-cutting features of enabling environments have also proven to be significant drivers. These have been identified as currency stability of exchange rates, stability of policies and enforcement of contracts, particularly in driving finance toward sustainable land use, and maintenance of political will and support as key enablers (CFLI, 2021).

3.4 Climate finance in context

332. Given the scale and speed needed for the transformation to low-emission, climate-resilient development pathways, it is critical to consider climate finance flows within the context of broader finance flows. A sole focus on positive climate finance flows will be insufficient to meet the overarching objectives of the Paris Agreement. Although such flows must be scaled up, it is also important to consider the role of broader financial flows and capital stock in meeting the long-term goals of the Paris Agreement. This does not mean that finance flows must all have explicit beneficial climate outcomes, but it does mean that they must integrate climate risks into decision-making and avoid increasing the likelihood of negative climate outcomes. Without this, the effectiveness of climate finance flows can be negated or even called into question.

333. The pursuit of embedding climate change in finance flows more broadly is a process that will take time despite the accelerated pace required to meet the Paris Agreement objectives. In particular, there is a clear need to ensure that efforts to shift finance flows towards low GHG emission and climate-resilient development pathways are mindful of the broader socioeconomic impacts of such shifts.

3.4.1 Climate finance flows in the context of global finance flows, opportunities and costs

334. Chapter 2 of the BA 2020 estimates a rise of 16 per cent in climate finance in the 2017–2018 period over the 2015–2016 period. The high bound climate finance estimate for annual flows in the 2017–2018 period is USD 775 billion on average. Although climate finance flows are increasing, they remain relatively small when compared to other finance flows, investment opportunities and costs (see figure 3.11).

103) See respective 4th Biennial Reports for UK, Belgium and Denmark examples, available at https://unfccc.int/BRs and Thwaites, 2020 for US.

335. Global total energy investment – including energy end use and efficiency, the power sector and fuel supply – was estimated at an annual average of USD 1.9 trillion in 2017–2018. Of this amount, approximately 51 per cent, or USD 977 billion, was in fossil fuel energy supply and power generation (IEA, 2020b).

336. Estimated total climate finance flows also remain well below the estimated needs to invest in low-emission, climate-resilient development. The IPCC special report on impacts of global warming of 1.5 °C estimated that average annual investments in low-carbon energy range from USD 1.6 to 3.7 trillion (USD 2010) globally up until 2050 (IPCC, 2018; IRENA, 2019b), estimated that cumulative investment in renewable energy needs to reach USD 27 trillion, or USD 770 billion per year, in the 2016–2050 period, in order to limit temperature rise to well below 2 °C. Linking infrastructure-related SDG ambition with infrastructure investment, it is estimated that USD 4.5 trillion between 2015 and 2030 in low- and middle-income countries could stay on track to limit temperature rise to 2 °C. Though it is also emphasized that beyond capital expenditure, operation and maintenance costs are a necessary condition for success (Rozenberg and Fay, 2019).

337. Furthermore, the estimated total climate finance flows remain well below the estimated opportunities to invest in low-emission, climate-resilient development. In 2018, the IFC estimated that there will be USD 29.4 trillion in climate investment opportunities for buildings, water and transport infrastructure in emerging market cities' economies up until 2030.

338. Climate finance flows can also be considered in the context of the rising costs of the adverse effects of climate change. While not all natural disasters (or climate-related hazards) can be attributed to climate change, climate change increases the risks that these costs will spike sharply and continue to rise in the future. The 2018 BA highlighted that economic losses from weather-related events were the highest ever as a result of the hurricane season that included Harvey, Irma and Maria. In 2018, total losses from weather-related events were USD 155 billion, of which USD 81 billion in losses were insured (Swiss Re, 2020). Data on the geographic distribution of insurance penetration are lacking, so it is difficult to compare the extent to which developing and industrialized countries were able to rely on insurance to recoup weather-related event losses, with further losses going unreported due to challenges around typology and data availability. The increasing frequency and intensity of climate-related hazards that will be experienced under a changing climate must be considered for new investment (IPCC, 2014b). Available data on tracking adaptation investment revealed that only an annual average of USD 29 billion was spent on adaptation in 2017–2018.

3.4.2 Climate finance flows in the context of domestic finance

339. The COVID-19 pandemic has and continues to demand high levels of domestic public expenditure. In 2020 and the recent future, much fiscal policy – referring to levers that raise public revenues and direct public resources such as through budget expenditure – will be directed at combating the economic impacts of COVID-19. The fiscal policy decisions made now for COVID-19 recovery will strongly influence private investment decisions and consumer behaviours. They will, therefore, have an impact on the carbon intensity and climate resilience of future economies and many have called for 'green' recovery to be central in fiscal stimulus packages (e.g. Hepburn et al., 2020, UNEP, 2020, and IMF, 2020). It is reported that of USD 1.9 trillion announced in COVID-19 recovery spending, only 18 per cent – USD 341 billion – may be considered as green investment (O'Callaghan and Murdock, 2021).

340. Government subsidies have long been a focus of discussions of fiscal policy for climate action. Existing at both the national and subnational level, subsidies often have multiple objectives, including the protection of poor and vulnerable households. But it remains important to understand how fiscal policy interacts with national climate objectives and to reorganize public subsidies that facilitate higher GHG emissions, such as fossil fuel subsidies and some land-use subsidies, as well as seek to explore how fiscal policy can increase resilience to climate change impacts.

341. Budgetary transfers and tax concessions for fossil fuel production and consumption were estimated to increase in 2017, breaking a downward trend from 2013–2016, at USD 340 billion (OECD/IEA, 2019). The rise comes despite falling oil and coal prices, with a large share of these fossil fuel subsidies supporting petroleum and with an overall focus on consumption (Taylor, 2020). Less is known about relevant off-budget government fossil fuel spending, such as through public enterprises (e.g. State-owned enterprises) and credit provided or guaranteed by government (Genscu et al., 2019).

342. The G20 countries pledged to phase out inefficient fossil fuel subsidies in 2009. The G7 has reinforced this commitment and encouraged other countries to phase out inefficient fossil fuel subsidies by 2025. G20 countries are found to continue to support fossil fuels through budgetary transfers and tax breaks, however, including for coal-fired power, although transparency is poor (Genscu et al., 2019). Some progress has been made toward achieving the pledge to phase out inefficient fossil fuel subsidies, however. This includes through the Powering Past Coal Alliance lead by Canada and the United Kingdom, through which members – including other G20 countries, non-G20 countries and subnational jurisdictions – commit to a moratorium on new coal power plants.[104] These commitments to fossil fuel subsidy phase-out can be important drivers of change.

343. Most countries also have agricultural and land-use subsidies. The 2015 SCF Forum highlighted the relative scale of subsidies, taxes and fiscal incentives in forestry and agricultural production that generate the underlying incentives that drive land-use activities.[105] These fiscal policies are largely aimed at guaranteeing minimum income for producers or affordability of food. Net agricultural subsidies for production are estimated at USD 619 billion per year (USD 708 billion to producers, minus the taxes of USD 89 billion, though these are not equally distributed globally (OECD, 2020g; Bellmann, 2019).

344. Data are limited on the effect that agricultural and land-use subsidies exert on GHG emissions (or climate change vulnerability). What is clear, however, is that agriculture is a key driver of deforestation worldwide and agricultural production land-use change accounted for a quarter of global GHG emissions in 2010 (WRI, 2018). The decline in Brazilian forest losses in 2015 compared with the 1990–2010 rate has been linked to greener support mechanisms, such as subsidized loans only to those that could demonstrate sustainable intensification and committed to not clearing more land (Bellman, 2019; Searchinger et al., 2020).

345. Countries have made and are making positive strides to reform subsidies that may encourage GHG emissions, including through deforestation and degradation. The proposed post-2020 reform to the EU Common Agricultural Policy could also contribute to mitigation and adaptation – including proposed incentives for climate-related action through direct payments.[106] Broader policy options to reduce GHG emissions from agriculture have been provided (WRI, 2018). Understanding the role that agricultural and land-use subsidies have in climate action, in combination with wider land-use policy, will support efforts to make fiscal policy consistent with low-emission, climate-resilient development pathways.

346. Adjustment to fiscal support shifts traditional business and production models. Support to those that are affected by climate policies so that the transition to low-emission, climate-resilient pathways are just, is important. The just transition ensures environmental sustainability as well as decent work, social inclusion and poverty eradication (Just Transition Centre, 2017). The concept is embedded in the preamble to the Paris Agreement and emerging literature covers aspects of new jobs, new industries, new skills and new investment with links to social protection, with funding also being made available to support best practice (Agulhas, 2018; ILO, 2019).[107]

347. The reform of subsidies to reduce emissions can in some instances free up fiscal space (Coady and Newhouse, 2006; World Bank, 2012c), while the application of carbon pricing can raise government revenue. The support for carbon pricing, via carbon taxes or emissions trading, is growing. Carbon pricing schemes are growing with jurisdictions increasing the coverage of emissions and reach within sectors in 2019. The World Bank (2020a), reported 61 carbon pricing initiatives either in place or scheduled for implementation (31 emissions trading schemes and 30 carbon tax schemes), covering 22 per cent of global GHG emissions in 2019 (an increase on 13 per cent of global GHG emissions in 2017). A portion of this increase in coverage can be attributed to the first emissions trading scheme in Latin America, established in Mexico in 2019. Governments raised an estimated USD 45 billion from carbon pricing in 2019, a doubling of USD 22 billion in 2017, 40 per cent of which went to the general budget, with almost half dedicated to environment or development projects. Carbon prices remain low globally, however, and the reach of carbon pricing coverage is highly variable across jurisdictions (World Bank, 2020a; I4CE, 2020).

348. Fiscal policy can also support climate change resilience. As noted, it is not well understood if the existing fiscal incentives in the agriculture sector are

104) Available at https://poweringpastcoal.org.

105) See the background paper prepared for the 2015 SCF forum, which is available at https://unfccc.int/sites/default/files/background_paper_prepared_for_the_2015_scf_forum.pdf.

106) Available at https://www.consilium.europa.eu/en/policies/cap-future-2020/.

107) Available at https://www.arc2020.eu/ireland-how-agriculture-sector-can-engage-a-just-transition/.

building resilience to the impacts of climate change or increasing potential exposure to them. The situation is similar in the water and sanitation sector, as well as in infrastructure. Fiscal policy to build resilience is likely to include introducing tariffs and exemptions for water supply, tax breaks for geographic diversification of farming and exemptions from land-use fees for road and rail infrastructure (Trujillo, Hong and Whitley, 2015; Norman et al., 2016). More research needs to be done to understand if and how changes in tax and subsidy regimes in these sectors will contribute to building climate resilience for stakeholders.

349. Fiscal policy for resilience also includes integrating climate risks into planning and budgeting cycles. In particular, government finances and a country's debt sustainability are exposed to fiscal risks from climate-related weather events (Volz et al, 2020). For example, spending on severe climate-related event relief and recovery or bailouts for public or private corporations – including State-owned enterprises – and financial institutions as a result of these events, can be considered contingent liabilities. In addition, changes in economic activity following a severe climate-related event can affect revenue raising and require social protection related payments to be made by government. Fiscal tools available to increase post-disaster liquidity and reduce debt default include contingency and reserve funds, ex-ante contingent credit and ex-post borrowing; and risk transfer and pooling, such as multi-country sovereign disaster insurance (see section 3.2.1), insurance of public assets and catastrophe bonds (Pigato, 2019, Watson et al, 2020). A climate-specific Public Expenditure and Financial Accountability (PEFA) framework has been developed and will be tested throughout 2020, assessing how well PFM systems can support the implementation of government climate change activities.

350. Fiscal policy can also capture public procurement that captures, for example, construction, vehicles and transport. Public procurement is estimated to contribute between 8 to 30 per cent of countries' GDP and through their purchasing power, government bodies and the public sector can encourage the production and consumption of sustainable goods and services (Yaker, 2019). The European Commission defines green public procurement as "*a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life-cycle when compared to goods, services and works with the same primary function that would otherwise be procured".* The concept of green public procurement sits more broadly within efforts towards sustainable public procurement.[108] The European Commission has been reporting on best practice and offering guidance for particular sectors since 2010.[109] Similarly, almost all OECD countries have engaged with the OECD Green Public Procurement initiative that has released best practice guidance (OECD, 2015c) and close to three quarters of OECD countries are said to be reporting on the results of green public procurement policies.

351. The issuance of sovereign and sub-sovereign green bonds is an increasingly common way to raise funds for environmentally sustainable public investments. Although corporate and financial issuers continue to dominate the growth in the green bond market, State actors can often make large-scale issuances where their creditworthiness is good, raising capital for new investments. In 2019, sovereign issuances of green bonds made up close to USD 25 billion of a total of USD 259 billion. Blue bonds for funding sustainable marine projects have risen but remain a relatively small component of green bonds hypothesized to be linked to challenges in property rights and challenges in the causality of impact. At the end of 2019, it was estimated that there were 50 deals from 32 issuers, mostly supporting offshore wind (CBI, 2020b).[110]

3.4.3 Developing country climate finance in the context of wider international finance

352. Finance is a critical point of intersection between international frameworks that seek sustainable economic growth and development. This includes the SDGs, the Paris Agreement, the World Humanitarian Summit and the Sendai Framework for Disaster Risk Reduction (Watson, 2016). It is also recognized that climate change and development agendas are inextricably linked (Granoff et al., 2014, OECD, 2017). In this context, development finance flows must be cognisant of climate objectives and vice versa. From a recipient perspective, INFFs are emerging as a national tool to finance development priorities, working towards the operationalization of the Addis Ababa Action Agenda. They go beyond what needs to be financed to consider how national objectives will be financed and countries are working to ensure that these

108) This includes the UNEP Sustainable Public Procurement Initiative, built by a Swiss-led, Marrakech Task Force in 2005 and evolved and tested in countries since then. In 2014, UNEP supported the establishment of the One Planet Summit Sustainable Public Procurement programme. See: https://www.oneplanetnetwork.org/sustainable-public-procurement

109) See https://ec.europa.eu/environment/gpp/index_en.htm

110) See also: https://insights.nordea.com/en/sustainability/sovereign-green-bonds/

integrate climate considerations, from both mitigation and adaptation perspectives (in addition to the examples in section 3.3.2 that illustrate how national institutions and processes are taking climate considerations into account in budgetary processes) (UN, 2019).

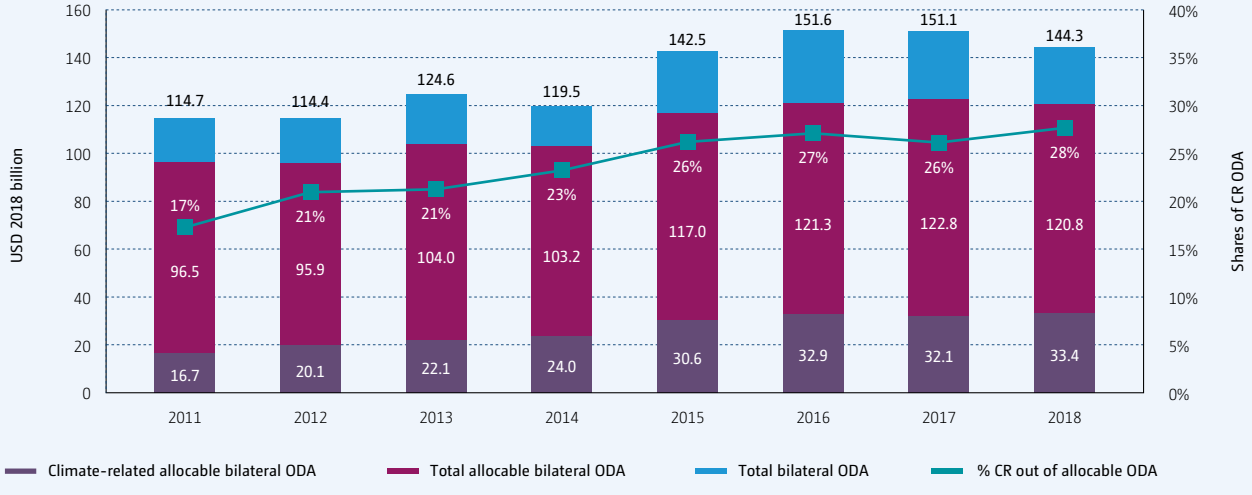
353. From a provider perspective, there is growing pressure for development assistance to avoid any increase in the likelihood of negative climate outcomes and seeking low-emission, climate-resilient development while reflecting recipient needs across sustainable development objectives (OECD, 2019b). In 2017–2018, climate-related development assistance remained at 27 per cent on average of total bilateral allocable ODA – bilateral aid that can be allocated to specific sectors or purposes unlike general budget support, actions related to debt or humanitarian aid. This compares to 27 per cent of bilateral allocable ODA tagged as climate-related in 2015–2016, which represented an increase from 22 per cent in 2013–2014 and 19 per cent in 2011–2012 (see figure 3.10). While this trend points to a mainstreaming of climate in development assistance, it is proposed that some development cooperation is undercutting effective climate action in the light of lacking mandates, resources, incentives and strategies to support developing countries to address climate change (OECD, 2019b).

354. Development finance institutions have been identified as essential in helping countries to deliver on their NDCs due to the scale of financing required (OECD, 2017). This applies to not just the MDBs, but also a range of national and regional DFIs (including the twenty-six national and regional DFIs represented by the IDFC). Many DFIs have made efforts towards increasing their climate finance programming. The MDBs, in particular, have made growing commitments to tackle climate risks and minimize GHG emissions when making investment decisions (AfDB et al, 2020). Analysis suggests that most MDBs are meeting their internally set climate finance targets as a percentage of total operations for 2020, many of which were made in 2015 (Thwaites, 2019). There remain further opportunities for MDBs to expand climate investment through either expanding the availability of development assistance or boosting climate-related investment directly (Granoff et al., 2017). Most, but not all, MDBs have set post-2020 climate finance targets, on top of climate and key sector strategies.

355. More can be done for MDBs to align their wider finance flows with climate objectives. For example, by fully integrating climate risk screening in operations or in the application of shadow carbon pricing to investment decisions (E3G, 2020). Research has identified that public finance institutions – including, but not limited to, the MDBs – supported oil, gas and coal with as much as USD 77 billion a year between 2016 and 2018, supporting both domestic and international projects (Tucker and De Angelis, 2020). The increasing scrutiny of the non-climate part of DFI portfolios is placing more pressure, in particular, on the discontinuation of investment in high-emission

Figure 3.10

Development Assistance Committee members' total committed bilateral official development assistance and the share that was climate marked



Source: Authors analysis of OECD CRS DAC statistics

Note: Data reflects OECD- DAC concessional flows of climate-related development assistance in constant 2018 USD.

projects and whole-of-portfolio transparency. There are calls to systematically shift upstream governance to align MDB finance flows, for example, through setting targets, goals and strategic direction, or at a more downstream structuring and appraisal level through evaluation process guidance or exclusion criteria (Cochran and Deheza, 2017).

356. There are an increasing number of non-traditional contributors to development finance, particularly encompassing South–South flows (see section 2.4 above). This includes major developing country economies, such as China and the Gulf States. It also includes national development banks with international operations, including the Brazilian development bank and IsDB, as well as the AIIB. A number of these institutions are increasing their climate finance flows. Since 2019, the IsDB has participated in the Joint MDB report (it reported climate finance of USD 446 million in 2019). In 2020, the Joint MDB report also included the AIIB (it reported USD 1.7 billion of climate finance in 2019) (AfDB et al, 2020). Climate finance flows from non-traditional actors, largely South–South in nature, will remain voluntary under the Paris Agreement. Greater transparency and consistency in data, however, will support the understanding of the leading role development finance institutions, particularly regional and national institutions, can take towards meeting the Paris Agreement's long-term goals.

357. Other officially supported international financial flows include OOF, motivated not by development objectives but by commercial and foreign policy objectives. Data from the OECD DAC on OOF are often partial, but can be marked as climate-relevant. In 2017–2018, an average of 8 per cent of not concessional or not primarily developmental finance was climate-marked, as compared to 5 per cent of OOF in 2015–2016. In 2017–2018, this amounted to an annual average of USD 1.1 billion, the majority of which was mitigation related (91 per cent).[111] OOF that is not concessional might be scrutinized in a similar manner to that being demanded of the MDBs. For example, export credit agencies are either private companies operating on behalf of the government or government agencies themselves to promote domestic companies' international export of goods and services. Between 2010 and 2016, export credits provided for non-renewable energy production plants went from USD 12 billion to USD 46 billion (OECD, 2019b). Assessment indicates that no ECAs yet have explicit requirements to phase out fossil fuels or to align operations with the Paris Agreement, although seven European countries have indicated plans to do so (Shishlov et al., 2020, Thomas, 2021).

358. While development finance flows and wider official public finance flows increasingly take into account climate, they remain considerably smaller than FDI. FDI, which plays a key role in economic development, was estimated at USD 1.5 trillion in 2019, though is expected to fall in 2020 as a result of the COVID-19 pandemic (UNCTAD, 2020).

3.4.4 Climate finance in the context of the broader financial system

359. Climate change can reduce operational and economic performance of companies and assets, with resultant impact on investors and lenders. This encompasses the actual and potential physical risks of climate change to assets and the associated direct and indirect losses and damages from the adverse effects of climate change, as mentioned in section 3.4.1 above, as well as the transition climate risk, capturing the shifts in asset values or higher costs of doing business that might be faced in the light of the move towards a low-carbon, more climate-resilient economy. There is a third risk, liability risk. This arises when compensation is sought for these impacts of climate change, be they physical or transitional (Batten et al, 2020). There has been a picking up of pace in recognizing climate risk in the financial sector over the past few years as these risks combine and become company risk and country risk, for example. Combined climate risks have further implications, such as increasing the costs of capital (Box 3.2), and particularly government borrowing (Cevik and Jalles, 2020), as well as posing risks to economic growth and the stability of the financial system.

360. The literature on asset stranding is growing, referring to assets that are prematurely written-down, devalued or converted into liabilities as a result of changes in patterns of supply and demand, pro-green regulation or policy, or technological progress. It includes, for example coal assets losing value as a result of increasing renewable energy production, though literature is also emerging of the concept of stranded resources that refer to forestry, agriculture and other land use (Carbon Tracker, 2020; CDP, 2019; Bos and Gupta, 2019; Lloyd's, 2017; Caldecott et al, 2016). USD 32 trillion in fixed assets are in sectors linked to the fossil fuel system. This equates to a quarter of the global equity market and half the corporate bond market, illustrating the risk that decline in the sector has to financial stability. The risk of stranding is dominated by the oil and gas (rather than coal) industries, however, as a result of their greater capital intensity (Carbon Tracker, 2020). USD

111) Authors analysis of OECD DAC statistics, OOF (indicator). doi: 10.1787/6afef3df-en (Accessed on 15 October 2020).

50 billion of investment decisions made by major oil and gas companies in 2018 was identified as at risk of stranding (Carbon Tracker, 2019). With challenges in forecasting the pace and scale of ambition on implementing climate policy, energy use and price, assessing the total value of stranded assets is difficult and estimates are highly variable. In the short term, Carbon Tracker (2018), estimates USD 1.6 trillion less investment is required from 2018 to 2025 in a 1.75 °C scenario compared to current policies, while IRENA (2017) estimates that USD 20 trillion of upstream energy and power generation investment alone is at risk of stranding under a 2 °C scenario, unless early action is taken to shift capital away from carbon-intensive investments. Outside the energy sector, investments to 300 companies active in commodity markets with high potential of deforestation risks in their supply chain were identified to amount to USD 31.7 billion in 2017 and USD 45.3 billion in 2018.

361. The demand for incorporating climate risk into private operations can be seen in the growth of support for implementation of the recommendations of the TCFD and a growing number of tools. As at September 2020, the TCFD had the support of over 1,440 organizations with market capitalization of over USD 12.6 trillion; as compared to 237 companies with market capitalization of over USD 6 trillion in 2017. While countries are taking different approaches to implementing TCFD recommendations(CISL, 2018), TCFD has increased pressure to develop standards for due diligence for accounting for climate risk or requesting/mandating investors to include sustainability aspects in financial disclosures. The Climate Disclosure Project, which has long tracked corporate climate action, found that over half of the institutions reporting to them in 2018 identify climate-related risks with the potential to financially or strategically impact their business (CDP, 2019b). The AODP found in its 2018 report focusing on insurers that 69 per cent of the 80 assessed insurers were able to disclose financially material climate-related risk, and 34 per cent have introduced climate-risk or Paris alignment strategies across asset portfolios. However, it is also acknowledged that promoting disclosure is currently more widespread than promoting action (AODP, 2018).

362. Tools providing a climate-adjusted financial risk metric include, for example, PACTA from the 2° Investing Initiative, the CISL's Climate Wise tool, and the Climate Risk Toolkit from Vivid Economics. Bingler and Colestani-Senni (2020) identify and assess 16 of these tools to assess climate transition risks for financial decision-making. It was found that there are differences in underlying assumptions or scenarios of baseline and transition developments, as well as data input and modelling choices, that call for a more systemic approach towards meaningful climate risk inclusion that can provide consistent results. These tools, however, support the mainstreaming of climate risk in business operations.

Box 3.2

The cost of capital under a changing climate

Capital market access often relies on credit ratings that, in general, suggest the ability of a country, city, public listed company or bond, to repay its debt. Ratings are used by capital providers to make more informed investment decisions. International debt investors, as a result of prudential regulations, can also require minimum investment grade ratings for investments.

Vulnerability to climate change has the potential to negatively impact any credit rating made (at sovereign, city or entity level) and therefore restrict access to debt. The adverse impacts of climate change, such as damage to infrastructure, population shifts due to forced displacement and rising social cost, all represent vulnerability to climate change that translates into a risk of default on debt servicing for financial institutions. Vulnerability therefore increases the cost of capital (interest rates) and this is only expected to intensify as a result of climate vulnerabilities.

Climate change, therefore, poses systemic risk to a country's financial system as climate-related adverse impacts are increasing and access to debt capital is expected to become more constrained owing to the increasing costs of capital. Any increase in interest rates will further constrain a government's ability to invest in resilience and development, particularly where a country lacks the enabling environment and investment grade rating to issue international sovereign debt.

Addressing the rising cost of capital as a result of climate change is a complex challenge. The countries that are well prepared and can demonstrate how they will deal with the risks of climate change could enjoy lower borrowing costs; this requires the enhancement of a country's structural resilience through mitigation and adaptation actions. Countries can also strengthen financial resilience through fiscal buffers and insurance schemes (see Section 3.4.2). Economic diversification and strong climate policy will support the management of the consequences of climate change on public finance, more broadly. If the above factors are further considered by investors and market makers, such as the rating agencies, it is possible that the rising costs of capital could be somewhat ameliorated.

Sources: Buhr et al., 2018, Carter, 2020, Moody's 2017, Kling et al, 2018.

363. Since the 2018 BA, private sector actors have also been engaged in and have driven, often with or alongside state counterparts, the emergence and expansion of a number of platforms and innovations towards 'greening' the financial system. These include expanded learning networks and facilitated knowledge-sharing on environmental and financial risk (see chapter 4 for a mapping of actions by actors relevant to the goal outlined in Article 2, paragraph 1(c), of the Paris Agreement on making finance flows consistent with low GHG emissions and climate-resilient development). The SBTi has expanded to more than 1,000 companies (with market capitalization close to USD 20.5 trillion) that have or are in the process of setting science-based GHG emission reduction targets.[112] The Net Zero Asset Owners Alliance gathers significant pension funds, insurers and investors that have committed to switch to a carbon-neutral portfolio. The 35 institutional investors that have committed to transition portfolios to net zero by 2050 represent USD 5.1 trillion in AUM.[113] We Mean Business – aggregating commitments such as of the Net Zero Asset Owners Alliance, but also RE100, EP100, EV100 and EP100 – report a total of, 1,771 commitments across 1,372 companies with USD 24.8 trillion of market capitalization.[114] These commitment-based mechanisms and initiatives are leading to the development of impact tools, such as measuring carbon footprints. Internal carbon pricing is picking up pace too, partially in reaction to voluntary commitments and targets. In 2019, 1,600 companies disclosed the use or planned use of internal carbon pricing, an increase from the estimated 1,400 companies that had or planned to use an internal carbon price in 2017.[115] Both government and public entities can make use of these shadow prices (in addition to using the social cost of carbon), but the transparency in application varies; thus, there is no shadow price benchmark (Morris, 2015).

364. The demand for green products can be seen in the year-on-year increase in green bond issuance and sustainability linked loans, for example. Investors seeking low-risk, long-return investments have been attracted by green and climate bonds, increasing awareness and driving up their quality, as well as data availability on green bonds. There has been a sharp growth in the issuance of green and climate bonds. Global issuance rose from USD 3 billion in 2011 to USD 259 billion in 2019, including sovereign issuance (CBI, 2020b). A survey of 58 banks identified climate strategy, risk management (e.g. carbon-intensive sector restrictions, assessment and scenario analysis) and opportunities (disclosure, targets and due diligence), and more specifically on implementation of TCFD recommendations (Boston Common, 2019) They find that while two thirds have adapted climate strategy, and 78 per cent are implementing risk assessment or 2 °C scenario analysis, these actions are yet to accelerate the rate of low-carbon lending and investment portfolios, neither have they broadened the uptake of green products and services in these banks.

365. Private-led commitments and action can work to positively influence public policy, in part by raising awareness and shifting opinion and understanding of climate action in both the public and private sector. A combination of strong domestic policy and regulation and direct public investment is understood to provide a legislative basis from which to strengthen activities, encourage private sector climate-aligned investment and financial innovation for climate action (Green Growth Best Practice, 2014; Climate Transparency, 2017b). With this in mind, financial system governance bodies have a role in shaping climate investment. These include government policymakers as well as oversight and supervisory authorities that are often quasi-governmental institutions. The mandates of policymakers, oversight and supervisory authorities are often to create a stable financial environment, with others aiming to maximize confidence, transparency and financial safety while minimizing risk.

366. A number of countries have or are pursuing some form of sustainable or green finance principles through financial system governance bodies. The existence of such principles indicates an awareness of climate change impacts and the existence of discussion at the policy level of climate risks in the national financial architecture. Others are developing green taxonomies (see section 1.3) that, in general, refer to the creation of a tool to help investors understand if the activity is environmentally sustainable and respond to the lack of clarity for investors as to which activities and assets can be considered 'green' or consistent with climate objectives, often considered a barrier to scaling up climate investment (World Bank, 2020b). There are also a number of prudential tools (see chapter 4) available for the supervision of the activities of financial sector actors that are relevant for climate change action.[116] They can enhance supervisory review and market discipline so as to identify the state of risk within the financial actor institutions or investments themselves (D'Orazio and Popoyan, 2019).

112) Available at https://sciencebasedtargets.org.

113) Available at https://www.unepfi.org/net-zero-alliance/.

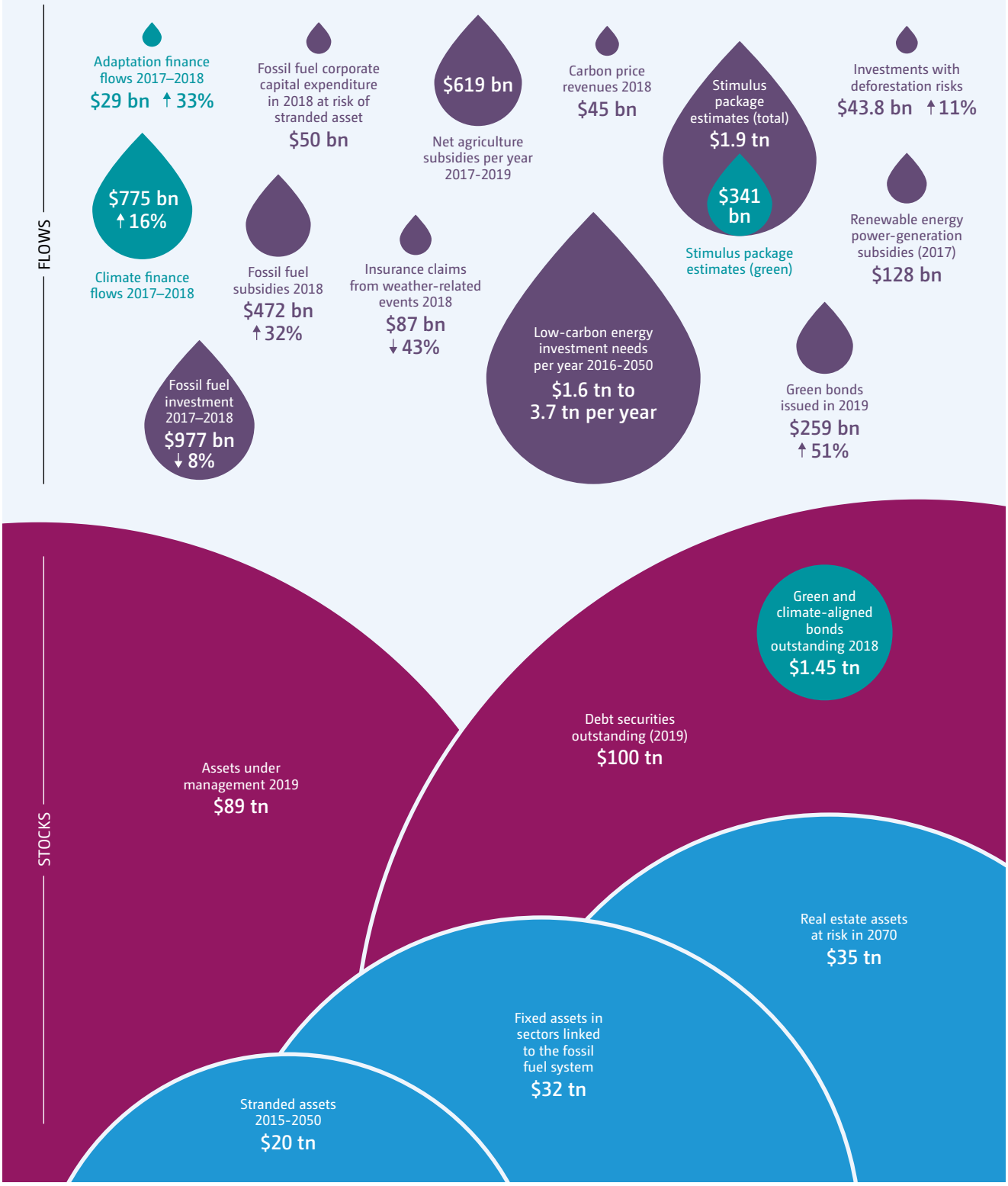
114) Available at https://www.wemeanbusinesscoalition.org/companies/.

115) Available at https://www.cdp.net/en/climate/carbon-pricing/carbon-pricing-connect.

116) While prudential policy focuses on the supervision of the activities of financial sector actors, for example, ensuring they hold sufficient capital and have adequate risk controls in place, monetary policy is instead related to the various tools that a central bank can use for influencing money market and credit conditions. These are noted as important to the climate response, but are not addressed here (see also Bolton et al., 2020).

Figure 3.11

Global climate finance in the context of broader finance flows, opportunities and costs



Note: Data points are provided to place climate finance in context and do not represent an aggregate or systematic view. All flows are global and annual for 2018 unless otherwise stated. The representation of stocks that overlap is not necessarily reflective of real world overlaps. The flows are not representative of all flows contributing to the stocks. Climate finance flows are those represented in section B of the Summary and Chapter 2 of the fourth BA technical report.

Sources: BCG 2020, Bosteels and Sweatman 2016; Carbon Tracker 2019, 2020; CBI 2018, 2019b; Forests and Finance 2021; I4CE 2020; IEA 2020b; IPCC 2018; IRENA 2017, 2019b; O'Callaghan and Murdock, 2021; OECD/IEA, 2019; OECD 2020g; SIFMA, 2020; Swiss Re, 2020; Taylor 2020.

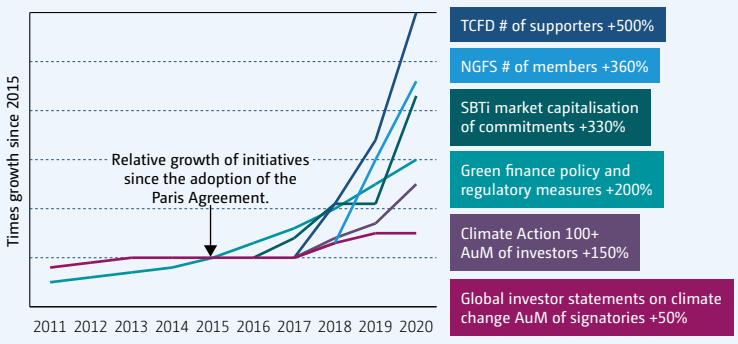
Chapter 4

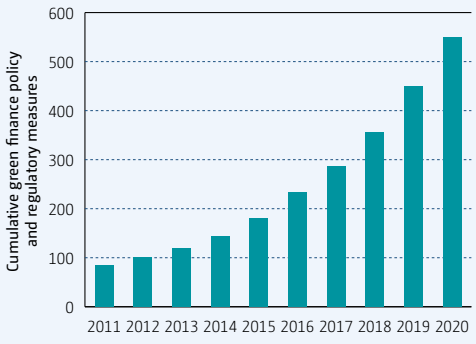
MAPPING INFORMATION RELEVANT TO ARTICLE 2, PARAGRAPH 1(C), OF THE PARIS AGREEMENT, INCLUDING ITS REFERENCE TO ARTICLE 9 THEREOF

The fourth BA (2020) includes mapping of relevant information to the long-term goal outlined in Article 2, paragraph 1(c) of the Paris Agreement on *making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development*

Significant growth in relevant initiatives has been apparent since the adoption of the Paris Agreement, particularly in coalitions fostering collective commitments on climate action.

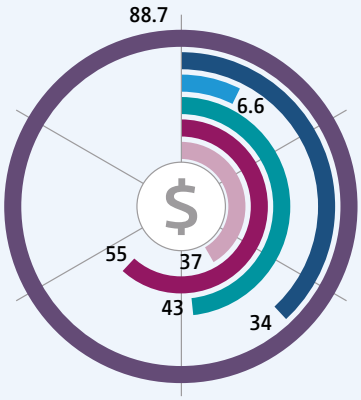
To date, initiatives with the widest coverage and scope among financial actors are voluntary in nature, often with non-prescriptive commitments to principles. More recently, **there is a trend of some initiatives including mandatory implementation requirements against common timelines.**





Investor initiatives

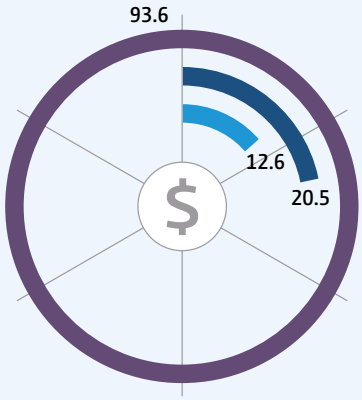
AuM (USD trillion)



- Total 2019 (BCG 2020)
- Paris Aligned Investment Initiative
- Net zero asset owner alliance
- Net zero asset manager initiative
- Climate action 100+
- Global investor statements on climate change 2019

Corporate initiatives

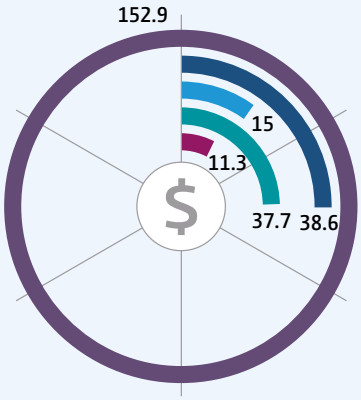
Market capitalisation (USD trillion)



- Total domestic market capitalization 2020 (World Bank)
- SBTi commitments or targets set at end-2020
- TCFD supporters at end-2020

Banking initiatives

Financial assets (USD trillion)



- Total banking assets 2019 (FSB)
- Net zero banking alliance
- Collective commitment on climate action
- PCAF (Banks only)
- Finance in Common

Assessing the real-economy impact and the risk of greenwashing remains a challenge.

Achieving the goal in Article 2, paragraph 1(c) depends on real-economy actions that reduce emissions in line with temperature goals and help to develop climate resilience. Many actors in the financial sector operate at a number of steps removed from real-economy activities. Therefore, **measuring the effective role of financial actors is a notable topic of debate among initiatives, including which metrics are most important as indicators of success.**

As many initiatives are early in their development, **proper evaluations of impact remain limited.**

Stakeholders may take action across a number of areas to support advancing efforts in relation to the goal in Article 2, paragraph 1(c)

- ✓ In public policy and finance: **having sustainable covid recovery packages in short term** and setting up financial markets for achieving net zero goals in long term.
- ✓ **Support just transition activities targeting high GHG activities and vulnerable developing countries at risk of climate impacts** reducing their access to capital.
- ✓ **Putting in place frameworks** that clarify the role of climate finance under Article 9 and its differences and complementarities with the long-term goal under Article 2, paragraph 1(c).

4.1 Introduction

367. Article 2 of the Paris Agreement sets out three interlinked objectives aimed at strengthening the global response to climate change, within the context of sustainable development and efforts to eradicate poverty. The first goal (Article 2.1a) relates to efforts to limit increases in the global average temperature to well below 2 °C above pre-industrial levels and pursue best efforts to limit the increase to 1.5 °C above pre-industrial levels. The second goal (Article 2.1b) addresses increasing the ability to adapt to and foster resilience to the adverse impacts of climate change. The third goal (Article 2.1c) relates to "*making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development*". Article 2 further states that the Paris Agreement will be implemented to reflect equity, and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

368. This chapter aims to fulfil the mandate outlined by the COP at its 24th session to request the SCF to map, every four years, as part of the BA, the available information relevant to Article 2.1c of the Paris Agreement, including its reference to Article 9 thereof. [117] The decision did not contain any specific guidance on what information may be considered relevant for Article 2.1c. In the absence of a common vision among Parties on what may be relevant, the mapping exercise in this chapter aims to reflect how different financial actors, in both the public and private spheres, refer to how their actions meet the goals of Article 2.1c and the Paris Agreement and therefore what they consider relevant from their perspective.

369. The information presented in this chapter may be useful for informing deliberations at COP 26. It may also be useful in regard to the first global stocktake in 2023 outlined in Article 14 of the Paris Agreement that is set to consider information at a collective level on ''the finance flows, including the information referred to in Article 2, paragraph 1(c), and means of implementation and support and mobilization and provision of support, including the information referred to in Article 9, paragraphs 4 and 6, Article 10, paragraph 6, Article 11, paragraph 3, and Article 13, in particular paragraphs 9 and 10, of the Paris Agreement. This should include information from the latest biennial assessment and overview of climate finance flows of the SCF.[118]

370. Furthermore, as one of the three long-term goals of the Paris Agreement, the information presented may also inform any considerations, if any, toward the setting of a new collective quantified goal on finance[119] and the financial support provided and mobilized through Article 9 of the Paris Agreement.[120]

4.2 Approach

371. The scope of the mapping was determined by reviewing available information related to the text of Article 2.1.c as follows:

Table 4.1

Scope for mapping available relevant information to Article 2.1c

	Paris Agreement	Mapping scope
Actions	"Making finance flows"	Actions (voluntary and involuntary) implemented through different mechanisms (e.g. policy, regulation, new financial instruments, principles, actor-led coalitions, forms of development co-operation) that effect finance flows in any form to aid the purpose of Article 2.1c
Effects	"consistent with a pathway towards"	Actions that result in low GHG/carbon and climate resilient development, and actions that support shifts in finance flows away from unsustainable high GHG emission and low resilient development
Goal	"low greenhouse gas emissions and climate resilient development"	Relates to Article 2, including 2.1a and 2.1b, in the context of equity, and poverty eradication.

Source: Authors

117) Decision 4/CP.24, paragraph 10.
118) Decision 19/CMA.1, paragraph 36(d).
119) Decision 14/CMA.1, paragraph 2.
120) Decision 18/CMA.1, annex, paragraph 121(q).

372. An actor-specific approach to the mapping is used (see figure 4.1), as opposed to focusing on particular asset classes or instruments or aiming to characterize approaches into specific categories. By mapping against actors, their actions (e.g. investment, lending, insurance, regulation, policy) which relate to finance flows and their perspective on which pathways towards low GHG emissions and climate-resilient development they aim to be consistent with are more clearly observable. It allows the mapping to demonstrate how actions can be related to the mandates, operations and tools at the disposal of each actor and how these may evolve over time as understanding on how to achieve the goals of the Paris Agreement is enhanced. The range of actors included are public, private, regulatory and market operators – those who either directly allocate, channel, oversee or facilitate finance flows. Actors who also contribute to understanding of the consistency of finance flows such as civil society, research institutes and other country support programmes and processes are included as they address policy propositions, criticisms and assessments, and complementary actions that are required to understand if the long-term goal can be achieved. These perspectives are included, where appropriate, within each actor category. The downsides of an actor-specific mapping approach include how multi-purpose actors may be pigeonholed into specific categories that do not broadly reflect their perspectives and capture all their actions.

373. The mapping within each actor category is structured to:

- clarify the relationship the actor category has with finance flows,
- identify any actions, activities or initiatives that actors in each category state, in their own perspective, as relevant to achieving the goals of the Paris Agreement, in particular Article 2.1c,
- description of the actions, activities or initiatives. In particular, emphasis has been placed on mapping multi-member initiatives, coalitions and groups that represent a collective effort and view on what may be relevant to Article 2.1c, as well as any specific individual case studies or examples of what may be considered best practice (see box 4.1),
- relevant information on results, achievements and effectiveness of such actions in the context of Article 2.1c.

4.3 Mapping of approaches to Article 2.1.c

4.3.1 Public finance

Finance ministries

374. Governments, principally via finance ministries, channel public finance flows typically through direct budget allocations, taxes and subsidies, and market mechanisms to facilitate certain development outcomes. The channels for distributing such national public

Box 4.1

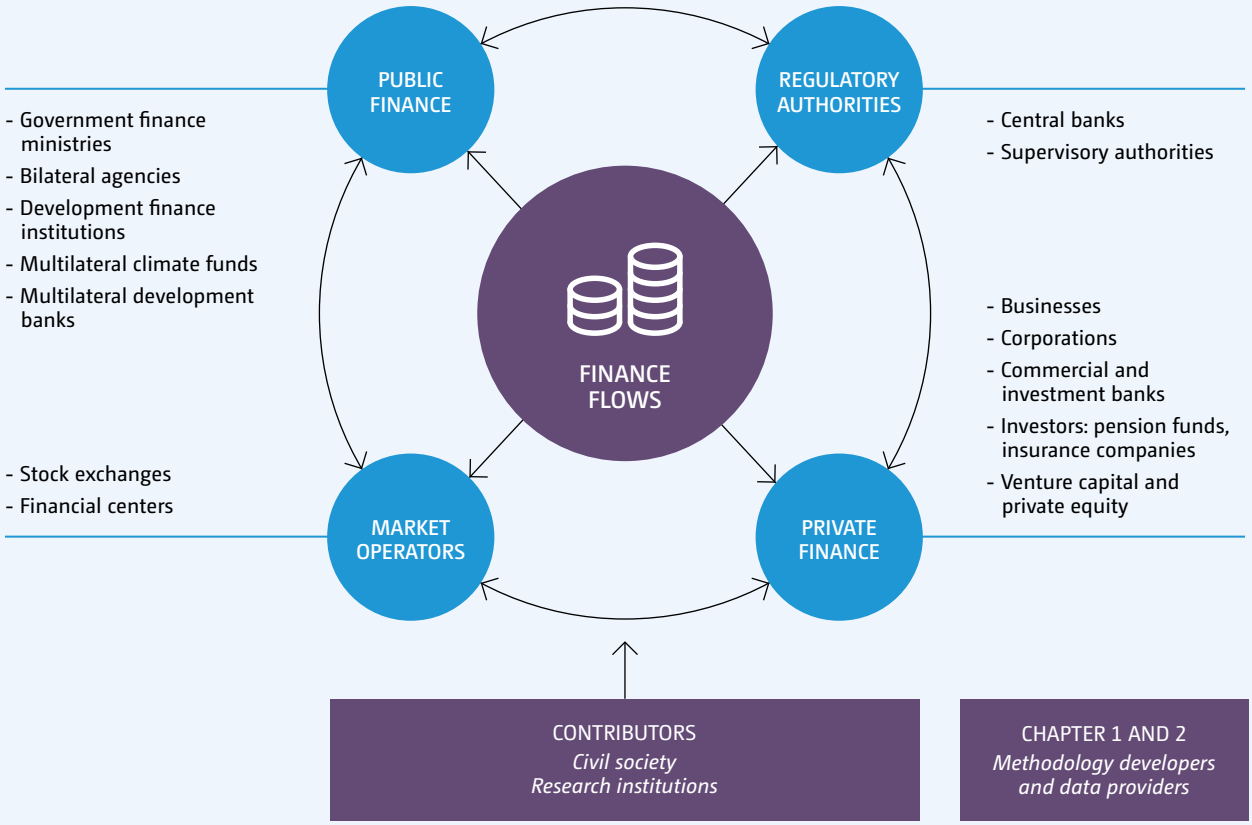
Challenges and limitations to mapping relevant information to Article 2.1c

Given the broad range and depth of potential interpretations of what is relevant information to making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development, any mapping exercise will be non-exhaustive and may be limited in representation across different actors, geographies, sectors and activities that directly or indirectly effect the achievement of the goal outlined in Article 2.1c. Placing a focus on mapping multi-member coalitions, associations and initiatives that may be relevant supports an effort to capture broader collective views on what may be relevant information. Relevant information on how actors perceive they should respond to the goals of the Paris Agreement, and Article 2.1c in particular, are typically found through such initiatives rather than through individual institutions, potentially due to network effects. However, it should be noted that such initiatives may not be fully representative of different views and perspectives, and any mapping should also provide space for individual cases of what may be considered alternative, best practice or leading examples.

Furthermore, there is a limited track record or in-depth information on specific details related to implementation to enable a thorough assessment of whether the information mapped is effective, and therefore relevant, in achieving the goal outlined in Article 2.1c. Where possible, different perspectives on potential impacts or potential 'green-washing' are noted and the chapter identifies potential limitations and challenges of the mapped information for assessing their contribution towards achieving the goal.

Figure 4.1

Actor-specific landscape on mapping information relevant to Article 2.1.c



finance flows are via sector-level ministries, subnational government structures, State development banks, State-owned enterprises, specialist agencies and other public authorities. Some national governments also have influence over a broader range of finance flows beyond direct budget allocation and fiscal mechanisms through regulatory oversight of all finance flows within an economy, including those related to international trade and development flows.

375. Following the adoption of the Paris Agreement in 2015, 62 ministries of finance coalesced under a *Coalition of Finance Ministers for Climate Action*. The purpose of the Coalition was strengthening cooperation and cohesion between national and global actions and reaffirming commitment to achieving the objectives of the Paris Agreement. Such commitment is reflected in the Coalition's primary manifesto contained in the Helsinki Principles[121] and signed by 62 countries, representing 39 per cent of emissions and 63 per cent of the world's GDP at mid-2021. The Helsinki Principles reflect 6 aspirations that the Coalition seeks to achieve to promote national climate action through public finance and fiscal policy, including the aspiration to "develop a financial system that supports mitigation and adaptation" to climate change.

376. Mapping progress to achieve the vision underpinning the Helsinki Principles was articulated in the Santiago Action Plan[122] which represents the collective vision of the collaborating ministries of finance on progress to achieve the Helsinki Principles and implement the Paris Agreement.

121) The Helsinki Principles commit the finance ministers, acting within their national frameworks and mandates, to align their mandates with the climate response and achieving the NDCs. Details on Helsinki Principles available at https://www.cape4financeministry.org/sites/cape/files/inline-files/FM%20Coalition%20-%20Principles%20final.pdf.

122) The Santiago Action Plan is viewable at https://www.financeministersforclimate.org/sites/cape/files/inline-files/Santiago%20Action%20Plan%20-COP25%20-%20final.pdf.

Box 4.2

Current progress under the Coalition of Finance Ministers for Climate Action towards mainstreaming of climate change in economic and financial decisions

Helsinki Principles	Current progress (as of Dec 2020)
Align national public finance policies and practices with the Paris Agreement	9 country case studies provide insights and lessons long term strategies that highlight cooperation, stakeholder engagement, political support, rigorous impact assessments, regular scheduled updates, just transition plans for political buy-in, integration of development objectives sectorial polices, progress monitoring, clear governance mechanisms, and the need to address adaptation and resilience.
Share experience and expertise among each other	Ministries of Finance are engaged in many areas related to climate change policy, but few have a climate plan or strategy in place. In many cases, resources and capabilities are being built.
Work towards effective carbon pricing measures	31 countries have implemented carbon pricing initiatives in some form, of which 19 are represented in the coalition. 65 per cent have fossil fuel subsidies in place. 60 per cent have some form of carbon taxation in place and are considering reforms on fossil fuel subsidies or taxation.
Take climate action into account in developing macroeconomic policy, fiscal planning, budgeting, public investment management and procurement practices	Ongoing progress in mainstreaming climate change in economic planning, with much of the underlying work either being considered, developed, trialed, or put into practice.
Mobilise private finance for climate action by facilitating investments *and* developing a financial system that supports mitigation and adaptation	About half of ministries of finance do not have mandatory disclosures in relation to carbon-intensive sectors, climate risks, and policy measures are not in place Finance roadmaps and green bonds are either in place or being considered in about half of the ministries of finance
Engage in developing and implementing the NDCs	Although environment ministries have typically the responsibility for development and implementation of NDCs, ministries of finance are playing an important role through inter-ministerial coordination More than 20 ministries of finance indicate that they do not coordinate technical assistance and financing support for NDC development and integration, nor provide technical input for NDC formulation or take a leading role. Ministries of finance currently do however support integration of NDC requirements into policy formulation, and efforts to ensure that climate policies are coherent and coordinated

Source: Coalition of Finance Ministers for Climate Action, 2020b.

377. The following boxes represent examples from Kenya and the European Union of how finance ministries are either developing or engaging on national strategies for embedding climate considerations into finance flows. These strategies offer useful insights into the different approaches that may support achieving the goals of Article 2.1c, in the long term.

378. A significant number of relevant country support processes and tools exist to explore how governments may operationalize responses to Article 2.1c in relation to their finance flows. CPEIR and climate budget tagging, as outlined in section 1.2.3, are a diagnostic tool used to integrate climate change into the national and subnational budget processes and may be useful to identify potential taxonomies to further clarify what are consistent flows and/or identify inconsistent flows in the public budget.

379. Similarly, the Addis Ababa Action Agenda introduced the concept of INFFs to help countries align their financing policies with long-term development plans. This concept is described as a *"country owned planning and delivery tool that provides a framework for financing sustainable development at the national level"* and considers the contribution of finance flows from all sources (i.e. public finance and taxes, capital markets, private finance flows). Given that Article 2 of the Paris Agreement rests within the context of sustainable development and poverty eradication, INFFs may provide a useful tool for operationalizing Article 2.1c.

Box 4.3

Kenya's National Climate Finance Policy

The Government of Kenya developed a Climate Change Act, which is the framework policy that mainstreams climate change into its national development priorities and periodic National Climate Change Action Plans (NCCAP). To operationalize and complement the Climate Change Act, the National Treasury and Planning Department developed a National Climate Finance Policy. This policy focuses on the extent to which public, private and international finance flows can be integrated into the national accounting systems. At each level of public, private and international finance flows, the Government of Kenya has specific objectives to build on existing processes and develop tracking systems to demonstrate the effectiveness of the funds being deployed towards climate action. Further, a dedicated Climate Finance Unit within the National Treasury pre-screens government projects to assess their alignment with national development priorities, climate risk and relevance.

The Government of Kenya is also integrating climate finance into the broader dimensions of its national financing system, through a number of capacity-building efforts among financial and finance-related stakeholders. These being i) developing environmental, social and governance safeguards, including guidelines for green bonds; ii) creating access to finance for county and national interventions through dedicated funds; iii) engaging with the central bank on green fiscal and monetary policies; iv) promoting climate leadership among national and subnational stakeholders; and v) assigning its own definitions of climate finance, thus adapting international guidelines for local contexts.

Box 4.4

European Union Sustainable Finance Framework

Work on sustainable finance began in December 2016 in support of the EU's aspirations for a Green Deal for the EU. An expert group was first convened to provide advice to the EC on i) how to steer the flow of public and private funds towards sustainable investment, ii) identify steps to be taken to protect the stability of the financial system from environmental risks, and iii) deploy the policies developed across the EU. The advice led to the creation of an Action Plan on Financing Sustainable Growth in 2018 launched under the context of responding to Article 2.1c[123]; and an EU sustainable finance framework based on four pillars:

- *Framework for establishing a unified EU classification system of sustainable economic activities* (i.e. referred to as their taxonomy) which encompasses four activity-level requirements: (i) must contribute substantially to one of the 6 EU environmental objectives[124] (ii) must not do harm to any of the 5 EU environmental objectives; (iii) must comply with minimum social safeguards; and (iv) must comply with technical screening criteria (to be established by the EC through a series of delegated acts, initially focusing on economic activities relating to the first two objectives).
- *EU green bonds standard*, which includes guidance and options for sectors and actors, as well as assessment guidelines for the impact of such standards on the development of a green bond market.
- *Low-carbon benchmarks*, being the EU climate transition benchmark, which focuses on minimum standards for methodologies and an EU Paris-aligned benchmark that focuses on improving transparency of benchmarks on ESG factors and Paris Agreement alignment).
- *Climate-related disclosures*, which aims to update the EC's non-binding guidelines on non-financial disclosures with exclusive focus on climate-related disclosures.

The sustainable finance framework also includes a platform on sustainable finance for ongoing advice from experts in the public and private sector. Advisory support relates to screening criteria for the EU taxonomy, and monitoring and reporting of capital flows towards sustainable investments.

In October 2019, the EU launched an IPSF with Argentina, Canada, Chile, China, Kenya and Morocco in order to strengthen international cooperation and mobilize private finance flows towards sustainable investments. At the end of 2020, it constituted 14 member jurisdictions representing 50 per cent of global greenhouse gas emissions, global population and 45 per cent of global GDP. Its joint statement setting out its aims, underlined *"the critical role the financial sector needs to play to reorient private investments toward sustainable activities worldwide, as provided by article 2.1 (c) of the Paris Agreement or under SDG 17, in addition to public funds"*.[125]

123) Available at https://ec.europa.eu/clima/policies/international/finance_en.

124) Article 6 of the taxonomy regulation includes mitigation, adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, waste prevention and recycling, pollution prevention control, and protection of the health of ecosystems.

125) Available at https://ec.europa.eu/info/files/international-platform-sustainable-finance-annual-report-2020_en,

380. 16 countries are now piloting INFFs within the context of their country plans (UN, 2019). A useful feature of the INFFs is their focus on developing a financing strategy which matches financing policy with a country's sustainable development priorities – given that it includes public finance, private finance and investment, and macro and systemic issues such as debt sustainability and issues related to financial stability (areas of concern that are also relevant to a shift in development towards low GHG emissions and climate resilience). Another feature of the INFFs is a focus on aligning development cooperation with national priorities, as per the Kenya example, where countries adopt policies to increase the coherence and effectiveness of development cooperation. These policies are intended to cover a broad range of financing sources, which implies a need for coordinating across different areas of finance (UN, 2019).

381. Similar to the national financing strategies proposed under the INFFs, the World Bank's Financial Stability and Integrity team together with the PRI are supporting government policymakers and regulators to implement reforms to build a sustainable finance system with a primary goal to align capital markets with the goals of the Paris Agreement and the SDGs.

382. The five priority elements of the sustainable investment policy and regulation toolkit address (figure 4.2):

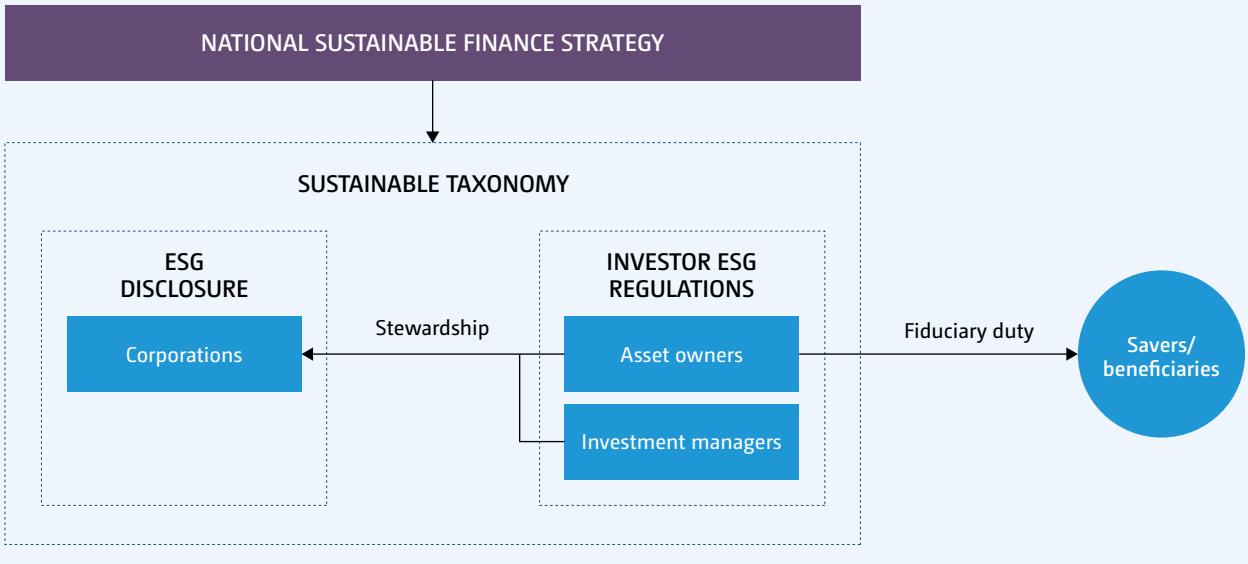
(1) Corporate ESG disclosures, including alignment with the recommendations of the TCFD.
(2) Stewardship (through engagement and voting).
(3) Incorporating ESG-related considerations into investors' duties, embedding these into investment decision-making, and evidenced by sustainability-related disclosures and reporting of ESG policies and performance targets.
(4) Taxonomies of sustainable economic activities, with clear criteria and common definitions to classify projects/investments as green or sustainable.
(5) National and regional finance strategies to encourage and enable low GHG emission transition and delivery of the SDGs.

383. During 2021, additional toolkits are being planned for policymakers by UNDESA, focused on banking and insurance sectors, and implementation guides. These toolkits are intended to build on the World Bank's Global Programme on Sustainability, and the PRI's policy programme, including country fiduciary duty road maps.

384. Campaigns by civil society call on governments to address specific issues, such as ending fossil fuel subsidies (Investor Agenda), reaffirming commitments to the Paris Agreement and the SDGs, and accelerating systemic reforms in economic, financial and macroeconomic systems and institutions to avert climate, health and development crises (Civil Society 20). As noted in chapter

Figure 4.2

Toolkit for sustainable investment policies and regulation



Source: PRI/World Bank, 2020.

3, civil society has also noted the potential inconsistency in energy subsidies and agricultural subsidies to advancing the objectives of Article 2. Similar research points to the inconsistencies of energy subsidies, showing that continued fossil fuel subsidies (estimated at USD 400 billion globally) enhance the investment returns of new, and yet to be developed, oil investments in the United States and potentially similar investments made abroad (Erickson et al 2017, Supran et al 2020). Further attention on achieving consistency of subsidies to industries and how they either support or undermine the objectives of Article 2.1c in particular, is essential for achieving its long-term low GHG emission and climate-resilient development goals.

385. An OECD study (Jachnik et al 2019) argues that the focus on inconsistent flows is a key difference in tracking climate finance flows related to Article 2.1c, in that the scope of finance flows extends beyond the usual flows tracked under the UNFCCC processes. Specifically, the differentiation being that climate finance presently tracks activities that contribute to climate objectives, and related co-benefits; whereas the focus of Article 2.1c on consistency requires a focus on activities that also undermine climate objectives and those with no perceived climate-related impacts. Two common challenges are indicated for tracking both sets of flows, being i) limited granularity of data, and ii) a common approach to which activities contribute to or undermine achieving low GHG emission and climate-resilient development (see section 1.6 for a description of this tracking methodology for consistency of finance flows).

386. Other work by the research community proposes overarching frameworks that may support governments in planning responses to Article 2.1c. A research paper by policy think tanks suggested a framework that governments may use to operationalize Article 2.1c through 3 main steps, being i) driving action through identifying and applying tools to shift and mobilize finance; ii) tracking progress in terms of actions and outcomes, and iii) raising ambition through shared leadership (Whitley et al., 2018). The tools available to governments (including public finance actors such as finance ministries) for shifting and mobilizing finance include financial policies and regulations (e.g. bank lending requirements), fiscal policy levers (e.g. subsidies and taxes), public finance instruments (e.g. grants, debt, insurance) and information instruments (e.g. voluntary standards, labelling). The report outlines opportunities for embedding Article 2.1c within the existing Paris Agreement architecture, including for example, in line with Article 9 to provide resources to developing countries to achieve Article 2.1c objectives. In the United Kingdom, the Finance Advisory Group to the Committee on Climate Change proposed a set of principles for climate-consistent finance to shift towards full alignment of the United Kingdom finance sector to support its net zero targets (AGF, 2020).

Bilateral agencies

387. Finance ministries of developed countries also allocate significant national finance flows towards international support towards developing countries and foreign investments through ODA, climate finance and other forms of development cooperation. For example, in 2018 up to 27 per cent of ODA targeted climate adaptation or mitigation objectives (see section 3.4.3.), but there remains no assessment of whether the remaining 73 per cent is consistent with Article 2.1c. In responding to a government request to analyse how development cooperation could be more in line with the goals of the Paris Agreement in the context of Article 2.1c, SIDA found that contributions not targeting environment and climate still require analysis to ensure they are not negatively affecting the fulfilment of the Paris Agreement (SIDA, 2020).

388. Shifts towards achieving consistency in bilateral financing arrangements are beginning to emerge. For example, the United Kingdom developed a Green Finance Strategy in 2019, which also commits the country to aligning its ODA with the Paris Agreement by *"using an appropriate carbon price in bilateral programme appraisal; ensuring any investment support for fossil fuels is in line with the Paris Agreement temperature goals and transition plans; implementing a proportionate approach to climate risk assurance; and, ensuring that relevant programmes do not undermine the ambition in countries NDC and adaptation plans"*(BEIS, 2019).

389. An OECD study (2019b) identified that only five of 37 development cooperation providers have climate considerations explicitly integrated in their mandates, specifically pointing out inconsistencies in the support offered by export credit agencies that undermine the objectives of the Paris Agreement.[126] The OECD study is supported by similar findings by the Natural Resources Defense Council and Oil Change International in relation to export credit agencies, estimating that between 2016 and 2018 export credit agencies of G20 nations were still providing significant support for fossil fuel

126) Available at also https://ideas4development.org/en/paris-agreement-role-of-export-credits/.

projects (around USD 40 billion per year). Further studies show that among the G20 export credit agencies, most international environmental and social standards are applied voluntarily and mainly focus on transparency with minimal direct influence on the investment portfolios of the ECAs. For example, none of the ECAs among the G20 countries have explicit arrangements to phase out fossil fuels over time (Climate Transparency, 2019).

Development finance institutions

390. National and regional development banks are an important interface as they integrate public and private finance flows through their developmental mandates. They also facilitate exchanges among subnational, national and international development bank co-operations. One such co-operation platform is **IDFC**, where 26 national and regional development banks from developing and developed countries are participating and collaborating on ways in which their institutions may align their flows with the objectives of the Paris Agreement, and contribute towards creating a pathway for low-GHG climate-resilient development. The IDFC represents USD 4 trillion in assets and has USD 600 billion in commitment to climate action and sustainability of institutions from Europe (7), Africa (4), Asia and Middle East (6), and Central, South America and the Caribbean (8).[127]

391. The IDFC framework suggests that aligning the finance flows of development banks with the Paris Agreement requires a "bottom-up process guided by long term national pathways" – evidenced by increasing the quantity of finance for climate investment and improving regulatory and policy frameworks to ensure finance flows are consistent with pathway towards low-GHG climate-resilient development (Cochran and Pauthier, 2019). At an institutional level, the IDFC framework encourages its members to:

- Interrogate all activities and business areas to assess their contribution to low-GHG climate-resilient development
- Prioritize actions that contribute to near- and long-term climate outcomes to avoid any lock-in or maladaptation (especially the risk that relative reductions or increases in resilience does not support the long-term goals of low-GHG climate-resilient development)
- Generate ambitious national and international contributions through active support by halting activities that are inconsistent with the Paris Agreement and which offer both incremental and transformative changes

127) Available at www.idfc.org accessed 20 September 2020.

392. Further, the IDFC framework suggests that national development banks should embed a Paris Alignment Strategy within their overarching strategies that addresses governance and strategies; policies and action plans; and accountability, reporting and tracking frameworks that contribute to Article 2.1c. Further, that when structuring and appraising investments, alignment may be achieved through decision-making and evaluation processes, creation of tools and criteria, developing knowledge bases and building the capacity of such teams. An important component of the IDFC framework is, having first established alignment with the Paris Agreement as an overarching element, to then assess the contribution of the organization to these goals as part of operational frameworks and procedures (Cochran and Pauthier, 2019). The IDFC framework premises such contributions at institutional and systems-level, where development banks are developing and deploying new financial instruments, as well as aiding in the necessary evolutions of the financial system.

393. The **Finance in Common** summit in November 2020 brought 450 public development banks from around the world, representing USD 2.3 trillion in annual finance flows and 10 per cent of all public and private flows. The summits' joint declaration committed banks to *"align our activities with the objectives of the Paris Agreement"*" with similar activities identified through the IDFC framework, including by: developing strategies for alignment in support of NDCs and long-term strategies to reach net zero emissions as early as possible in the second half of this century; mainstreaming resilience and adaptation in banks' strategies and operations and supporting NAPs; helping redirect private finance flows in support of low-carbon and climate-resilient development; and supporting governments in moving away from high-carbon activities and avoiding maladaptation (Finance in Common, 2020a).

394. As part of the summit, the association of EDFI , representing 15 DFIs, made an additional statement setting out 2022 as a date by which they would "align all new financing with the objectives of the Paris Agreement"' including through methodologies that will be consistent with decarbonization trajectories of the relevant sector or country. In addition, the DFIs would gradually decrease aggregated GHG emissions of their investment portfolios to net zero by 2050. A further commitment is to exclude new coal and oil financing from 2021 and limit other fossil fuel financing to "Paris-aligned"' projects before excluding them by 2030 at the latest (Finance in Common, 2020b).

395. Individual bilateral development finance institutions are also advancing their understanding of how Article 2.1c affects their activities. For example, in 2017, AFD announced a vision to ensure all its development activities are fully compatible with the Paris Agreement. Implementing this vision meant conducting sustainable development assessments for projects to denote compatibility as either i) doing no harm; ii) avoiding lock-in of negative effects such as long-term emissions; or iii) avoiding climate physical risks in the context of country policies, strategies and trajectories. This approach entailed the development of country factsheets on national policies and trajectories that supported analysis on whether projects were consistent with country-driven transitions or adaptation objectives, as well as dialogue on policy with partner countries and provision of assistance for long-term climate modelling (AFD, 2020). A mid-term review of the policy noted that lack of data, countries' varying definitions of trajectories and the absence of a single standardized set of criteria for compatibility affected the implementation of the strategy. The AFD Group updated its strategy in 2020, adopting a two-year road map for alignment with the Paris Agreement through three areas of focus:

- strategic alignment through dialogue with countries and counterparties
- operational alignment through development of sector-specific tools on what activities may be aligned or misaligned, informed by NDCs and updated with exclusion lists
- Alignment of the institution itself adopting a definition of alignment at the AFD Group level, updating the institutions risk appetite framework to consider climate physical and transition risks and implementing internal alignment in operations.

Multilateral climate funds

396. The GCF and GEF serve as operating entities of the Financial Mechanism of the Convention and the Paris Agreement. These operating entities are specifically mandated to support the implementation of the Paris Agreement under Article 9 in addition to other objectives, by ensuring efficient access to resources and enhanced readiness support for developing countries, especially for least developed countries and SIDS.

397. The GCF's updated Strategic Plan 2020–2023 articulates in the first part of its long-term strategic vision the aim to promote paradigm shifts across both high-impact areas of mitigation potential and countries' adaptation and resilience needs, including by supporting a wider alignment of financial flows with

countries' climate plans and strategies. For the second part of its strategic vision, the GCF's updated Strategic Plan articulates its support for developing countries in the implementation of the Paris Agreement and the Convention within the context of the evolving climate finance landscape. The GCF's long-term strategic vision references Article 2 as a guide, in addition to the objective of channelling new, additional, adequate and predictable financial resources to developing countries and catalysing climate finance, both public and private, and at the international and national level.[128]

398. The GCF's updated Strategic Plan, using Article 2 as a guide, also resonates with the founding principles of its Governing Instrument agreed in 2011: *"In the context of sustainable development, the Fund will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their GHG emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change"*. The GCF's initial investment framework also referred to its funded activities being one of five ways in which a paradigm shift can be demonstrated as an overall contribution to pathways towards global low GHG emissions and climate-resilient development.

399. The GEF-7 climate change focal area strategy was the first to be developed after the Paris Agreement. It mirrors language in line with Article 2, that is, *"to support developing countries to make transformational shifts towards low emission and climate-resilient development pathway"* (GEF, 2019b).

Multilateral development banks

400. The finance flows from MDBs take the form of lending (through debt and equity instruments, policy loans, guarantees and other forms of credit enhancement) as well as technical assistance (through conditional and unconditional grants). Since the Paris Agreement came into force, several MDBs together with the IDFC committed to align their finance flows with the Paris Agreement at the One Planet Summit in 2017 (IDFC/MDB, 2017). Later, in 2018, these MDBs released the building blocks describing their alignment approach including specific contributions towards operationalizing Article 2.1c (figure 4.3). Working groups around each of these blocks are developing methods and tools for future application.

401. Of the six building blocks of MDB Paris Alignment, four may be said to relevant to Article 2.1c including:

(1) Assessing their operations against transition risks and opportunities related to climate change;
(2) Ensuring operations are consistent with different countries' response to the Paris Agreement. This will be achieved using an assessment methodology (including activities lists) that categorizes projects as either "considered-aligned", or "considered non-aligned" – with the proviso that projects that are "considered-aligned" do not undermine the goals of the Paris Agreement. The assessment will initially focus on the project approach and assess the broader economic activity context and be based on expert judgment;
(3) Actively managing physical risks such that their response is consistent with climate-resilient development;
(4) Developing services to support countries to put in place long-term strategies to shift their development pathways.

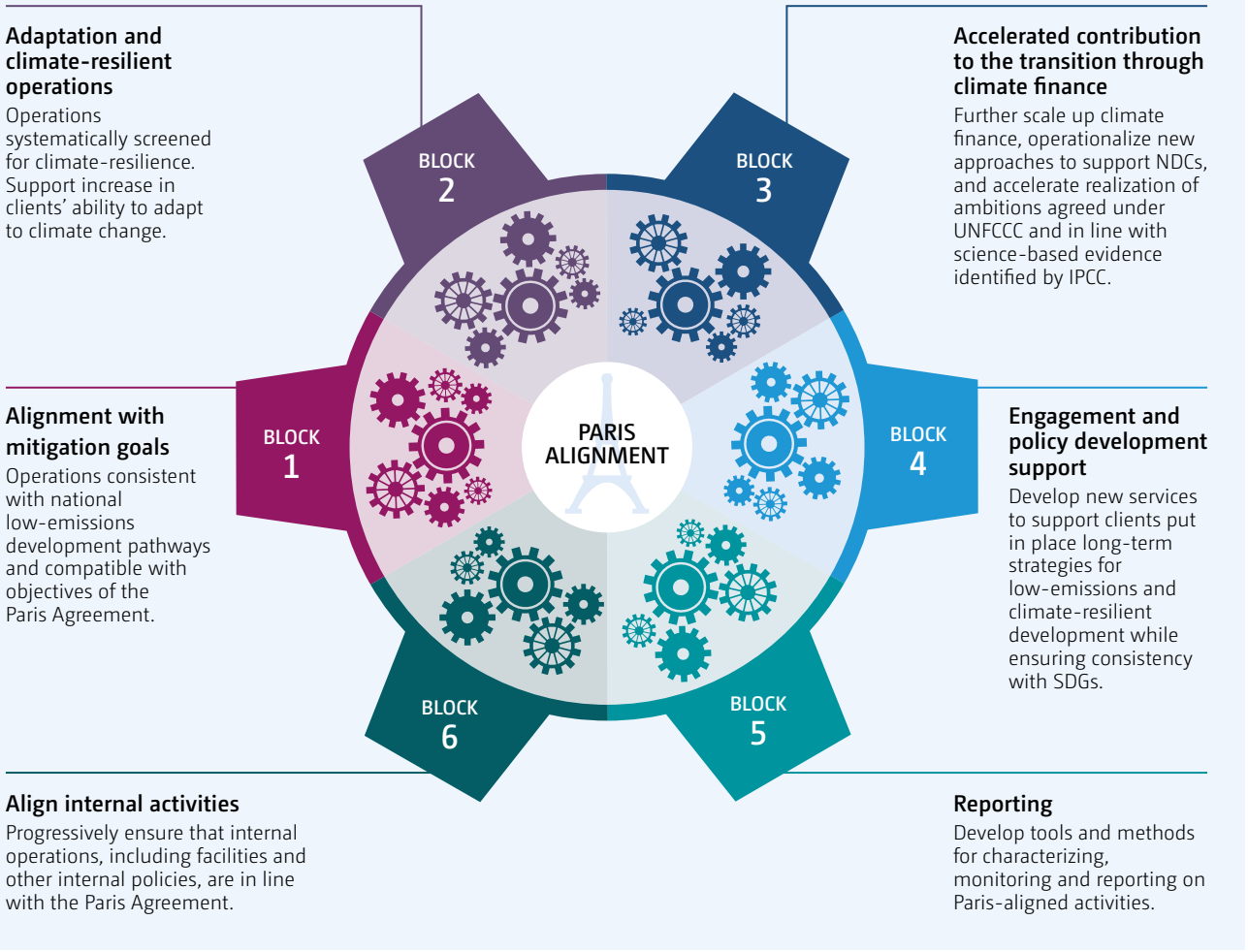
402. At the UN Secretary-General's Climate Action Summit, several MDBs released a joint statement committing to urgent action to enable countries to adapt and mitigate against climate risks[129]. The signatories committed to five key actions, including setting specific targets for 2025:

(1) Support to increase climate finance flows over time (at least USD 65 billion annually by 2025, with USD 50 billion for low- and middle-income countries, and doubling adaptation-related finance up to USD 18 billion annually);
(2) Mobilize additional USD 40 billion climate investments annually by 2025 from private sector investors;
(3) Assist clients to deliver on the goals of the Paris Agreement (using a common framework as from 2021);
(4) Develop a new transparency framework that maps the impact of MDBs' activities and how these activities are helping clients to either meet or exceed their climate commitments;
(5) Take measures to support clients to shift away from the use of fossil fuels (via the design of long-term low GHG emissions and climate-resilient strategies; and work with national development banks to develop financing and policy strategies to support a just transition that is inclusive and economically diversified).

128) See GCF Board document GCF/B.27/21, paragraph 6 and 7.
129) The signatories are ADB, AfDB, AIIB, EBRD, EIB, IDB Group, IsDB, NDB and WBG. Full statement available at https://www.ndb.int/wp-content/uploads/2019/09/Joint.pdf.

Figure 4.3

Building blocks of the MDBs towards alignment with the Paris Agreement



403. Aside from the collaborations among MDBs mentioned above, certain MDBs are also aligning their activities to respond to the Paris Agreement, based on individual circumstances and time frames. Some of these are more advanced than others, for example:

- ADB's 2017–2030 climate change operational framework sets out its intent to support a regional shift toward a low GHG emissions and climate-resilient development path with reference to Article 2.1c, while recognizing the different starting points and levels of capacity of member countries (ADB, 2017).
- The AIIB's Corporate Strategy from 2021 to 2030 noted that it would align its relevant policies, strategies and operations with the joint MDB Framework once it is fully developed and agreed upon (AIIB, 2020). Separately, it has developed a climate change investment framework against the goals outlined in Article 2 of the Paris Agreement to apply to investment portfolios across geographies and asset classes with a test case study on AIIB's Asia climate corporate bond portfolio (AIIB and Amundi, 2020).
- The EIB decision in 2019 to align all financing activities to the goals and principles of the Paris Agreement by the end of 2020 complements its commitment to increase support for climate action and environmental sustainability – aiming for such investment to exceed 50 per cent of its overall lending activity by 2025. Operationally, the EIB (as the EU's climate bank) aims for its remaining lending activity, advisory and treasury operations to *do no significant harm* to the low-carbon and climate-resilient goals of the Paris Agreement (EIB, 2020). This goal also extends to operationalizing alignment across different financial products and activities and not only lending. Advisory

assignments will only be undertaken consistent with alignment frameworks for the bank. Intermediated operations such as credit lines, equity and debt funds will focus on three sectors: energy, mobile assets for transport services, and energy-intensive industries. Finally, treasury operations of the bank include bond investments screening which both exclude high-risk sectors and identify best-in-class issuers to invest in.

- For climate-resilience aspects, for example, the EIB implemented a climate risk assessment system in 2019 to screen and assess for physical climate risk and identify adaptation measures within its direct lending portfolio. In terms of low GHG emission pathways, the bank has adopted a list of project activities sector by sector that may be supported and not supported in line with its role as the EU's Climate Bank and EU 2030 emissions targets and the goal of net zero by 2050. For activities outside the EU, the same approach will be followed but interpreted with the local context with due recourse to regional or local benchmarks. Across all activities, the bank will also update the shadow cost of carbon used in project appraisals to ensure broad alignment with modelling results consistent with a 1.5 °C target.
- The EBRD's 2021–2025 Green Economy Transition strategy 2.1 approved in 2020, adopts a complete alignment approach for all EBRD operations with a two-year phase-in period to take into account lessons from the application of the MDB joint approach (EBRD, 2020).
- The IsDB, in its 2020–2025 Climate Action Plan, framed its actions in reference to the six building blocks and committed to ensure that all its financing is consistent with low-carbon and resilient development. It noted that the Paris Alignment process is dynamic because activities considered aligned today, as part of a transition, may be considered misaligned in a few years, necessitating ongoing assessment of alignment (IsDB, 2020).
- The 2nd Climate Change Action Plan (2021–2025) of the WBG sets out a commitment for the World Bank to align all new operations by July 1, 2023 and 85 per cent of new operations of IFC and MIGA to be aligned by July 1, 2023 and 100 per cent of these by July 1, 2025. The alignment approach, among others, focuses on supporting transformative investments in key systems that contribute the most to emissions and have the greatest climate vulnerabilities (e.g. energy, food systems, transport and manufacturing), results and impacts, and on improving and expanding climate diagnostics.

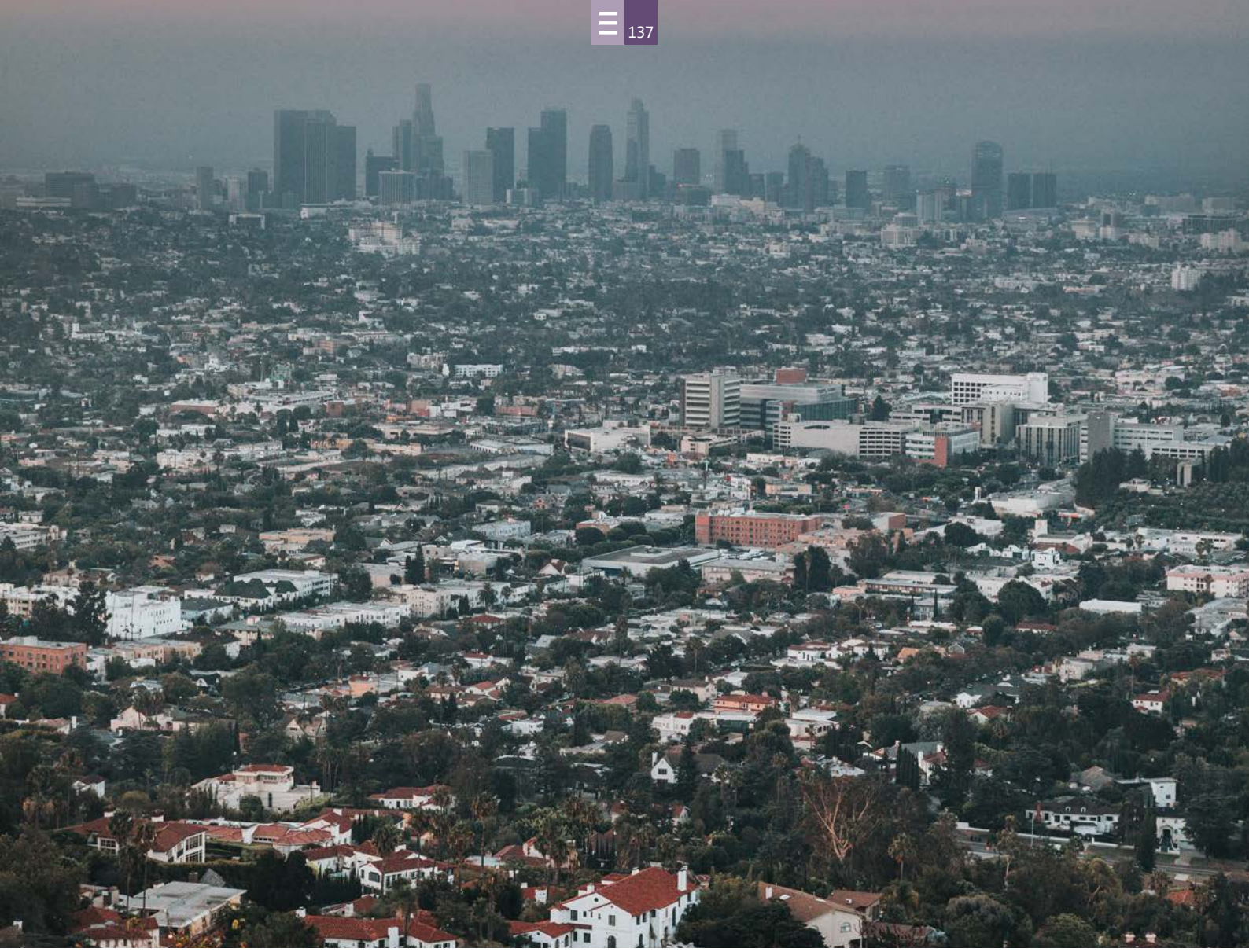
404. Research tracking the alignment efforts of the MDBs shows that although significant finance flows are committed to climate investment, parallel investment still flows towards fossil fuel projects. The E3Gs Public Bank Climate Tracker Tool demonstrates that, based on the average investment allocations in 2016–2018, none of the MDBs were deemed to be aligned with the Paris Agreement (E3G, 2020).

4.3.2 Private finance

Businesses and corporations

405. Private finance flows of corporations and businesses are relevant for Article 2.1c as these entities invest in reconfiguring and expanding operations, supply chains and processes directly impacting the real economy and the achievement of a pathway towards low GHG emissions and climate-resilient development. Company reporting and disclosures on their environmental impact as well as their awareness of climate-related risks to their business models, provide critically relevant information on whether the finance flows they direct are responding to climate change and the goals of the Paris Agreement. Many corporations have reported on sustainability risks and impacts through reporting platforms such as CDP – formerly known as the Carbon Disclosure Project – GRI, SASB and others. A 2018 CDP survey found that 53 per cent of the 6,707 companies that responded to its questionnaire identified substantial climate-related risks with the potential to financially or strategically impact their business. A further 22 per cent identified climate-related risks but did not yet consider them substantive risks to their business(CDP, 2019b).

406. The focus of improving corporate disclosures on climate risks to help direct finance flows was taken further by the FSB in 2015, when the **TCFD** was established. The aim was to develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance underwriters about their climate-related financial risks. The industry members of the TCFD, who are drawn from a wide range of industries and countries from around the globe, finalized the recommendations in 2017 after extensive public engagement and consultation. They set out the disclosures that a wide range of users and preparers of financial filings have said are essential to understanding a company's climate-related risks and opportunities. It identified several categories of risks based on a) physical impacts of climate change including acute risks from extreme weather events and chronic risks due to



changing weather patterns, sea level and temperatures; and b) transition risks including policy impacts such as carbon pricing and regulatory changes, litigation risks, technology and market risks due to changing customer behaviour and unsuccessful investments, and reputation risks if seen to not adequately respond to climate change. Complementing these risks are the opportunity sets identified by responding to climate-related risks such as i) resource efficiency, ii) availing of policy incentives and investment opportunities in lower emission energy sources and carbon markets, iii) development of new products and services for low emissions or climate adaptation, iv) access to new markets and v) resilience through resource substitutes and diversification.

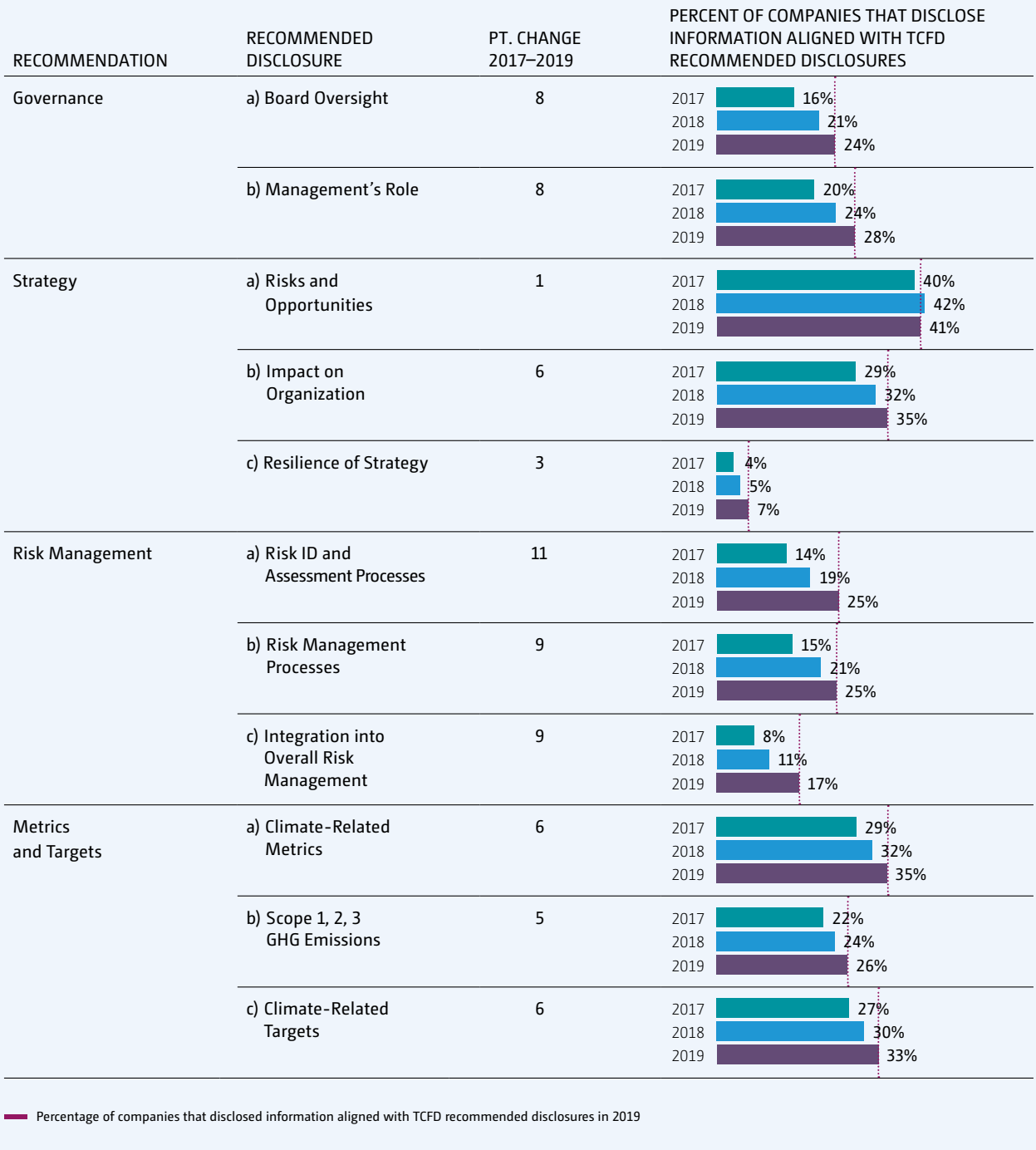
407. The key points of the TCFD recommendations are that i) they are adoptable by all organizations, ii) they are included in financial filings (reporting), iii) they provide information that enables decision-making and is forward looking on the financial impacts of climate change, and iv) implementation should be strongly focused on risk and opportunities related to transition to a low-GHG economy (TCFD, 2017). A core feature of the TCFD recommendations is recognizing that climate change poses a material risk to businesses and corporations, thus the disclosure requirements enable open dialogue among shareholders, investors and clients. In turn, such disclosure can be followed through with appropriate governance arrangements on the basis of these disclosures. The recommendations of the TCFD suggest the use of scenario analysis as a tool for reporting on risks and opportunities, which has potential to assess consistencies and inconsistencies in how corporations allocate capital expenditures and take investment decisions.

408. Support for implementing the TCFD recommendations increased by 85 per cent in 2020 compared with 2019 to 1,500 organizations, while a review of 1,700 companies in 69 countries showed a steady increase in reporting of climate-risks based on the TCFD recommendations, as per figure 4.4 below (TCFD, 2020), reflecting progress on governance, strategy, metrics and targets, and risk management.

409. A core focus among actors owning and managing private finance flows is improving reporting and

Figure 4.4

TCFD-aligned disclosures from 2017 to 2019 (sample: 1,701 public companies)



Source: TCFD, 2020.

transparency. However, a 2018 study questions the assumption that improved reporting standards would achieve greater alignment of finance with climate change needs. The study notes that "that if risks are fully revealed, finance will respond rationally and in ways aligned with the public interest". It concluded that "policies focusing on the development of standards and engagement, and more generally on disclosure, such as data collection and reporting standards, may enable investors to overcome incentives for short-term decision-making". However, the study found that the increased disclosures were not supported by evidence

of institutional investor views and hence argued that "whilst transparency can help, on its own it is a very long way from an adequate response to the challenges of aligning institutional climate finance" (Ameli et al, 2020). Research of this nature is useful in tempering and contextualizing the extensive responses to Article 2.1c in particular, and is helpful for identifying what dimensions would be useful for responses that contribute to medium- to longer-term shifts necessary to create low GHG emission climate-resilient development pathways.

410. Other business- and corporate-level responses include high-level commitments to act as part of advocacy campaigns for adopting strict carbon emission targets across their operations and supply chains in line with 1.5 °C pathway scenarios. For example, We Mean Business tracks 410 companies that have signed up to initiatives to source 100 per cent renewable electricity (RE100), improve energy productivity (EP100) or transition to using EVs in company fleets (EV100).[130] In 2019, 1,600 companies disclosed the use or planned use of internal carbon pricing, an increase from the estimated 1,400 companies that had or planned to use an internal carbon price in 2017.[131].

411. Over 1,000 businesses have committed to science-based targets to reduce their emissions, with 511 companies adopting an approved target by the **SBTi**, and 353 of those with targets that are in line with 1.5 °C pathways. At the end of 2020 these companies had an estimated market capitalization of USD 20.5 trillion in value. A methodology for the financial sector is under development (see section 1.6) but has already attracted commitments from over 50 financial institutions. Among the signatories to the SBTi are 63 entities classified as banks, and diverse financial institutions from Asia, Europe, North and South America, Africa and Oceania.

412. MSME businesses direct substantial finance flows that are critical to building the resilience of communities and reducing harmful greenhouse gases, yet often represent the "*unseen sector*" in terms of development and climate responses (IFC, 2019). To date, there is limited research or information connecting MSME financing with Article 2.1c, which is a key missing dimension, especially as regards the equity, eradication of poverty and sustainable development aspects of Article 2 objectives.

413. The G20 GPFI initiated work in 2017 on policy options for financing climate interventions by rural micro-, MSMEs. Such options included increasing access to finance and incentivizing lending schemes for MSMEs. The GCF offers useful examples of how focusing on MSMEs supports Article 2.1c of the Paris Agreement and the "greening" of the financial system more broadly. The rationale for supporting MSMEs via its Private Sector Facility is that such entities often lack direct access to formal banking systems and are unable to express their climate finance needs. Projects such as offering access to business loan programmes in Mongolia to support emission reduction, and an agricultural risk-sharing facility for MSMEs co-financed by IADB are examples of using finance flows towards MSMEs to enable shifts in support of Article 2 of the Paris Agreement.

Commercial and investment banks

414. Finance flows of commercial and investment banks relate to savings, investment and primary lending activities, engaging in capital markets through listed and unlisted instruments in debt, equity, foreign exchange, commodity and other markets. Treasury functions within these banks trade both primary and secondary financial instruments, in national and transnational contexts, including development of financial instruments to manage and trade different forms of risk identified by these banks based on the profile of their clients and the available transacting counterparties.

415. The UN **Equator Principles** was among the first initiatives pre-dating the Paris Agreement that encourages a focus on ESG factors to be integrated into the lending and risk management practices of commercial and investment banks, particularly in how projects are evaluated. The Equator Principles are considered a *"financial industry benchmark for determining, assessing and managing environmental and social risk in projects"*. The July 2020 update to the Equator Principles acknowledges that these principles contribute towards achieving the SDGs, and that negative impacts on climate, ecosystems and communities need to be avoided – particularly financing projects such that the objectives of i) the UN Guiding Principles on Business and Human Rights; ii) the Paris Agreement; and iii) conservation and biodiversity are aligned. The UN Equator Principles have been adopted by 114 financial institutions in 37 countries[132].

130) Available at https://www.wemeanbusinesscoalition.org/companies/.
131) Available at https://www.cdp.net/en/climate/carbon-pricing/carbon-pricing-connect.
132) Available at https://equator-principles.com/members-reporting/.

416. Since the UN Equator Principles, several other similar initiatives addressing climate-related investments have been launched which aim to contribute to the Paris Agreement and are relevant for Article 2.1c as they relate to finance flows, such as:

- *International Capital Market Association (ICMA) Green Bond Principles*: voluntary guidelines for issuing green bonds and ensuring that evaluating environmental impacts of such bonds is possible
- *Loan Market Association (LMA) Green Loan Principles*: standards and guidelines (high level) for application in developing green loan products
- *Poseidon Principles*: framework for assessing and disclosing the climate alignment of financial institutions' shipping portfolios.

417. The **Principles for Responsible Banking** is a UNEP-led framework launched in September 2019 to ensure banks' strategies and practices are aligned with the SDGs and the Paris Agreement. 199 banks with USD 53 trillion in assets had signed up to the Principles as at October 2020, an increase of over 50 per cent after one year since the launch of the initiative. A subset of 38 signatories, with USD 15 trillion in assets, have also committed to a collective action pledge through the **CCCA**. The CCCA commits these banks with three years of signing to set targets to align their portfolios with the Paris Agreement. Signatories to the Collective Commitment to Climate Action are required to:

- *"Take decisive action from the moment of signing, focusing on the most carbon-intensive and climate-vulnerable sectors within their portfolios;*
- *set and publish sector-specific intermediary and long-term targets for aligning their portfolios with a well-below 2-degrees and striving for 1.5-degrees Celsius trajectory, based on scientific climate scenarios; and,*
- *drive and facilitate the necessary transition in the real economy through their client relationships, products and services."*

418. Measures taken by signatories within the first year of the CCCA include taking steps to assess portfolio alignment, developing financial products and services to support clients, assessing climate-related transition risks, setting clear target dates for exclusion policies for certain investments, and strengthening investments in sectors aligned with the Paris Agreement (UNEP FI, 2020b). The initiative has also developed guidelines for climate target setting for banks, which have been adopted by the Net-Zero Banking Alliance under the Glasgow Financial Alliance for Net Zero (see box 4.5).

Box 4.5

The Glasgow Financial Alliance for Net Zero

The GFANZ was launched in April 2021 by Mark Carney and the COP26 Private Finance Hub in partnership with the UNFCCC Climate Action Champions and the Race to Zero campaign and the COP26 Presidency. GFANZ is a strategic forum bringing together the leading net zero initiatives across the financial sector to broaden, deepen and raise ambition to align with a net zero future. Its stated aim is to support progress on Article 2.1c specifically. Alliances exist for finance subsectors such as asset owners, asset managers, banking and insurance.

Source: Available at https://racetozero.unfccc.int/wp-content/uploads/2021/04/GFANZ.pdf.

419. Civil society is monitoring the actions among actors managing private finance flows, which tracks the consistency of their actions relative to the environmental commitments being made under the Paris Agreement. The Rainforest Action Network's annual Banking on Climate Change report highlights positive bank policies supportive of the objectives of Article 2 of the Paris Agreement, but also reflects a need for improvement as some banks continue to finance fossil fuels and identifies this as inconsistent finance flows amounting to USD 2.7 trillion since the Paris Agreement and growing each year from USD 640 billion in 2015 to USD 736 billion in 2019 (Rainforest Action Network et al, 2020).

420. Similar analysis by the WRI examines the nuances of the commitments being made by the world's 50 largest private sector banks, considering commitment design and context. The analysis, however, does not consider implementation or performance against these commitments but does compare the magnitude of sustainable finance commitment against average annual fossil fuel funding.

421. Investor activism through shareholder resolutions is placing pressure on banks to align with sustainability and climate pledges. In January 2020, ShareAction proposed a resolution for consideration at the Barclays AGM in May 2020. The ShareAction resolution called on the bank to set and disclose targets to phase out the provision of financial services to the energy sector and electric and gas utility companies that are not aligned with Articles 2.1(a) and 4.1 of the Paris Agreement. The resolution required that timelines for the phase-out must be aligned with the Paris Agreement goals and the bank should report on progress on an annual basis, starting from 2021 onwards. The ShareAction resolution was supported by

23.95 per cent of the votes cast and therefore was not adopted by the company.

422. In response and via subsequent engagement with ShareAction, Barclays announced an update to its climate change position. Firstly, its ambition to become a net zero bank by 2050; to align all of its financing activities with the goals and timelines of the Paris Agreement, starting with the energy and power sectors; and to provide transparent targets to judge its progress with regular reporting from 2021.The Barclays management formulation received 99 per cent shareholder support at the AGM. This provides a useful example of how concerted shareholder pressure at the right time has resulted in bank action. Similar examples exist in South Africa where investor activism (Just Share) led several local banks to adjust their lending policies against new coal projects.

Investors

423. Investors, including pension funds and insurance companies, have been one of the most long-standing finance sector stakeholders to mobilize around contributing to the goals of the Paris Agreement. Since 2009 the **Global Investor Statement on Climate Change** has been issued ahead of COP meetings to engage with governments and highlight the need for effective policies and regulations to achieve the goals of the Paris Agreement. The 2019 Statement was signed by 515 investors with over USD 35 trillion in AUM (AIGCC et al, 2019). The **Investor Agenda** under the PRI complements the Statement, encouraging investors to adopt science-based targets to achieve net zero emissions by no later than 2050, with credible intermediate targets. Over 1,200 investors with over USD 35 trillion AUM are implementing actions to align with the goals of Article 2 of the Paris Agreement under 4 focal areas. These are:

- investment (set net zero targets, phase out investments in thermal coal, integrate climate change in portfolio analysis and decision-making).
- corporate engagement.
- investor disclosure.
- policy advocacy.

424. Investors have also begun proactive allocation of portfolios in line with climate goals. The **Net Zero Asset Owners Alliance** gathers 33 pension funds, insurers and investors that have committed to transition portfolios to net zero GHG emissions by 2050 consistent with a 1.5 °C pathway and to regularly reporting on progress against five-year intermediate targets mirroring Article 4.9 of the Paris Agreement. The 33 members represent USD 5.1 trillion in AUM.[133] In October 2020, the Alliance published its 2025 Target Setting Protocol for public consultation that outlines how emission reductions in the range of 16 per cent–29 per cent by 2025 are to be achieved on public equity and corporate debt portfolios with similar reductions recommended for real estate. Further sector-specific targets, engagement actions and financing or investment targets are also due to be reported on.

425. The IIGCC – the European investor coalition – has initiated a **Paris Aligned Investment Initiative** in 2019 with participation from over 70 members with over USD 16 trillion in AUM. The purpose is to establish a framework for Paris alignment for portfolios. In 2020, the Initiative published its Net Zero Investment Framework (see also section 1.6) reflecting its agreed pathway on how to align with the Paris Agreement goals that investors should have an investment strategy consistent with for achieving a global target of net zero emissions by 2050. Not only does the framework include components on target setting, strategic asset allocation and investment in alignment by asset class, but also advocacy and engagement actions as well as governance and strategy elements.

426. A particular investor focus is on advocacy. The 167 most GHG-intensive companies are targeted through the **Climate Action 100+** initiative and supported investor networks. As at December 2020, 545 investors with collectively USD 52 trillion AUM were engaging with these 167 companies to encourage them to establish net zero targets. The initiative's progress report, however, shows that only 10 per cent of those companies had set targets for their most material emissions, while 26 per cent of the electricity utility companies had developed coal phase-out plans consistent with the Paris Agreement (Climate Action 100+). The progress report also highlights that 184 new oil and gas projects were sanctioned by companies critical to reducing emissions, showing misalignment and inconsistency with the goals of the Paris Agreement.

427. The insurance community is also engaged via the **PSI**, which was launched in 2012 to complement the UN Global Compact and PRI to reflect the growing influence of sustainability on business operations. Over

133) Available at https://www.unepfi.org/net-zero-alliance/.

140 organizations have adopted the PSI principles, including insurers representing USD 14 trillion in AUM.[134] The PSI represent a framework for the insurance industry to address ESG in its risk management and strategic operations, and they aim to provide quality and reliable risk protection in these contexts. "*Sustainable insurance*" is defined as a strategic approach whereby all activities in the insurance value chain (including engagements) are done in a responsible, forward-looking manner that identifies, assesses, manages and monitors ESG issues (UNEP FI, 2012). Four key principles constitute the PSI, which are useful for contributing towards the consistency and pathway objectives of Article 2.1c:

- To embed ESG into decision-making relevant to the insurance industry (including actions related to company strategies, risk management and underwriting, product and service development, claims management, sales and marketing, and investment management).
- To work with clients and business partners to raise awareness of ESG issues, manage risk and develop solutions (applying this to clients and suppliers, insurers, reinsurers and intermediaries).
- To work with governments, regulators and other key stakeholders to promote widespread action across society on ESG issues.
- To demonstrate accountability and transparency through regular public disclosure in implementing principles.

428. The AODP found in its 2018 report focusing on insurers that 69 per cent of the 80 assessed insurers were able to disclose financially material climate-related risk, and 34 per cent have introduced climate-risk or Paris alignment strategies across asset portfolios. However, it is also acknowledged that promoting disclosure is currently more widespread than promoting action (AODP, 2018).

429. Networks and collaborations are emerging among **private equity firms** to align with the Paris Agreement, where setting net zero targets, investing in disruptive technologies and focusing leadership efforts appears to be a primary focus. These efforts support the objectives of Article 2.1c in that they advance shifts in finance flows towards a pathway to meet the Paris Agreement's mitigation, adaptation and resilience goals:

- *Initiative Climat International:* iCI was originally launched in 2015 by French private equity firms under the name Climate Initiative IC20 (Initiative Climate 2020) and is now an international network of private equity investors. Members focus on mutual collaboration to analyse, manage and mitigate climate-related financial risk and emissions in their portfolios, in line with TCFD.
- *Coalition for Private Investment in Conservation*: CPIC is a group of private and public sector financial institutions and academia working on increasing private, return-seeking investment in conservation.
- *Alliance Ventures*: a venture capital collaboration between Groupe Renault, Nissan Motor Corporation and Mitsubishi Motors Corporation to deploy finance towards zero-emission vehicles and develop automotive technologies in an equitable manner.
- *Global Impact Investing Network*: a collaboration that convenes impact investors to facilitate knowledge exchange, highlight innovative

134) Available at https://www.unepfi.org/psi/signatory-companies/.

investment approaches, build the evidence base for the industry, and produce tools and resources for increasing finance flows towards solutions targeting societal challenges such as climate change and poverty eradication.

430. Among **family foundations, endowments and charitable organizations**, efforts are also under way to align their finance flows with the Paris Agreement. A primary focus appears to be setting net zero emission targets and ensuring that their future investments deliver positive societal changes (impact). Examples of these include:

- *Intentional Endowments Network*: IEN is a network of higher education and other endowed institutions working to mobilize capital with long-term investment strategies that create an equitable, low-carbon and regenerative economy. IEN actively supports the adoption of Net Zero Portfolios and has partnered with the UN-supported Net Zero Asset Owner Alliance to this end.[135]
- *Responsible Investment Network – Universities*: The universities of Cambridge, Edinburgh and St Anne's College, Oxford, formed RINU with support from ShareAction, the United Kingdom's largest social impact investor, Big Society Capital, and the National Union of Students' sustainability charity, SOS-UK. The three universities, "representing around £5.4 billion, are united in their ambitions to create positive change through their investment practices". (Big Society Capital, 2019)
- *Charities Responsible Investment Network*: "Charities Responsible Investment Network, coordinated by ShareAction, was established in 2013 to support foundations and other charities with investments to further their mission through responsible investment." ShareAction provides various resources, such as proxy voting guides and information on how to file shareholder resolutions in the United Kingdom.

431. Collaborative efforts which seek to leverage the size of holdings and forums for sharing of market best practices are becoming more widely established. Global coalitions such as the Race to Zero campaign span multiple classes of finance and real economy actors. Below is a summary of some, noting the breadth of their activities and their primary focus.

Box 4.6

Digitalization to mobilize investors

The digitalization of finance is an important trend via technologies such as blockchain and bitcoin (Bayat-Renoux and van der Lugt, 2018). According to a recent report commissioned by the UN, such digitalization technologies hold the potential for both advancing the SDGs and climate response, while at the same time deepening financial exclusion, increasing inequality and creating rifts among regions (UN, 2020). These trends are relevant for Article 2.1c in that these technologies may facilitate finance flows in future.

The digital technologies and innovations include the use of data analytics, artificial intelligence (AI) and digitalized finance channels such as blockchain to advance climate and sustainability objectives. A few examples of these include:

- 2° Investing Initiative is building qualitative client profiling software for use by banks and consumers to translate their non-financial objectives into investment beliefs and strategies. Examples of similar initiatives are GreenMatch (Switzerland), Kickante (Brazil) and Ecofinance (Russia)

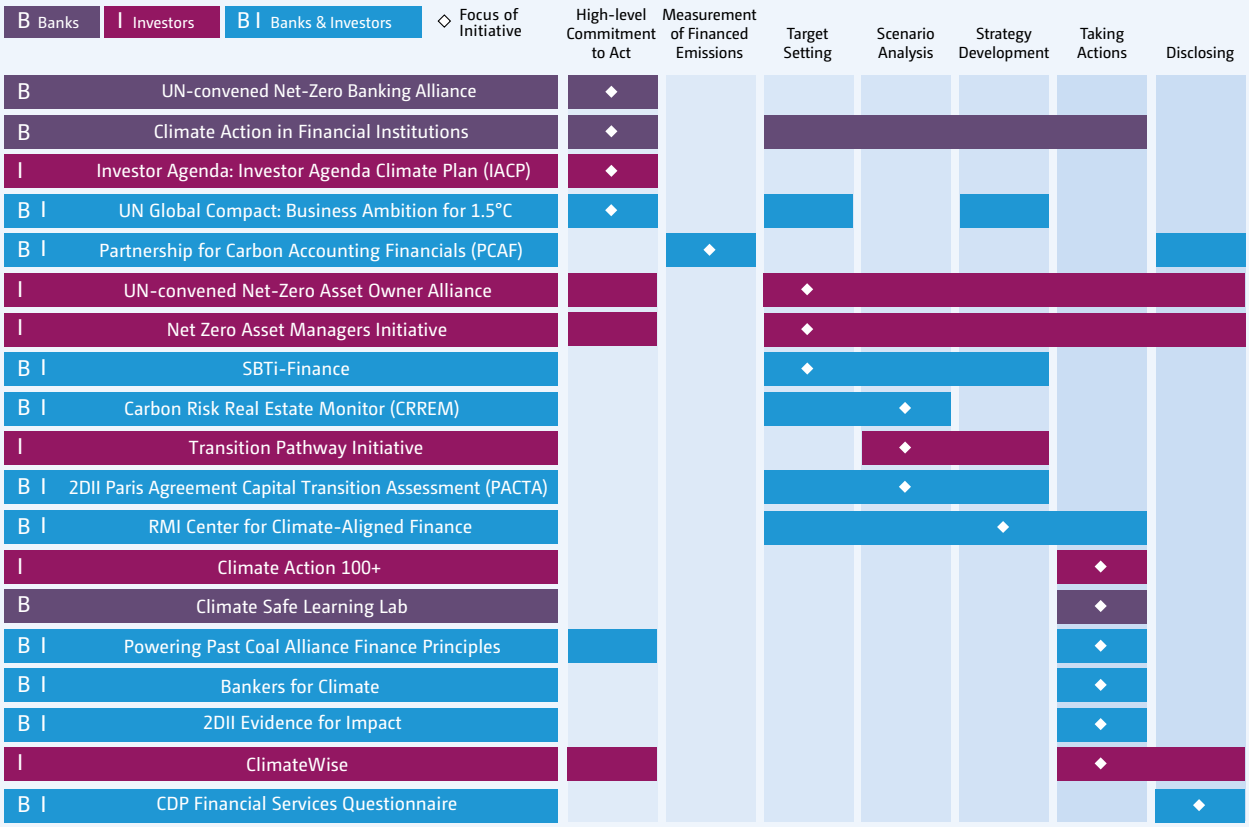
- Ecomill (Italy) is a crowdfunding platform which raises finance for energy efficiency, sustainability mobility, smart grids and environmental services. Similar platforms include Yolk (Republic of Korea), OnePlantCrowd (Netherlands), GreenFunder (United States), Thundafund (South Africa) and Crowdear (Argentina).

Technological innovations among retail investors are evident. For example, the Coldwell Banker Global Luxury report examines wealth trends in 2019 and predicts that at least USD 68 trillion will shift from 'baby boomers' to millennial millionaires due to intergenerational shifts in wealth by 2030 (CBGL, 2019). The Morgan Stanley Institute for Sustainable Investing found in a 2019 survey that 95 per cent of millennials are interested in sustainable investing (Morgan Stanley, 2019), which is being accommodated via technology app-based investment providers such as Tickr, Wealthsimple, Swell Investing, OpenInvest and Mogo. Innovations on these platforms include only offering sustainable investment options and causes specific to climate and sustainability such as zero waste, renewable energy, clean water and healthy living; or framing options as "reduce greenhouse gas emissions", "divest from fossil fuel producers" and "fight deforestation" together with other typical exclusions for the likes of tobacco, alcohol and firearms.

135) Available at https://www.intentionalendowments.org/net_zero_portfolios_roundtable_for_small_and_medium_sized_endowments?splash=1.

Figure 4.5

Alliances among private finance flows on climate and sustainability



Source: PCAF, 2021

432. Examples of the alliances illustrated above include:

- *Global Alliance for Banking on Values*: GABV is a network of banks, banking cooperatives and credit unions, microfinance institutions and community development banks from across the world. GABV's focus is a "shared mission to use finance to deliver sustainable economic, social and environmental development, with a focus on helping individuals fulfil their potential and build stronger communities".[136]
- *Partnership for Carbon Accounting Financials*: PCAF is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the GHG emissions associated with their loans and investments through measuring financed emissions (including scenario analysis, target setting, climate action, reporting and a high-level commitment to act (PCAF, 2021)

4.3.3 Regulatory authorities

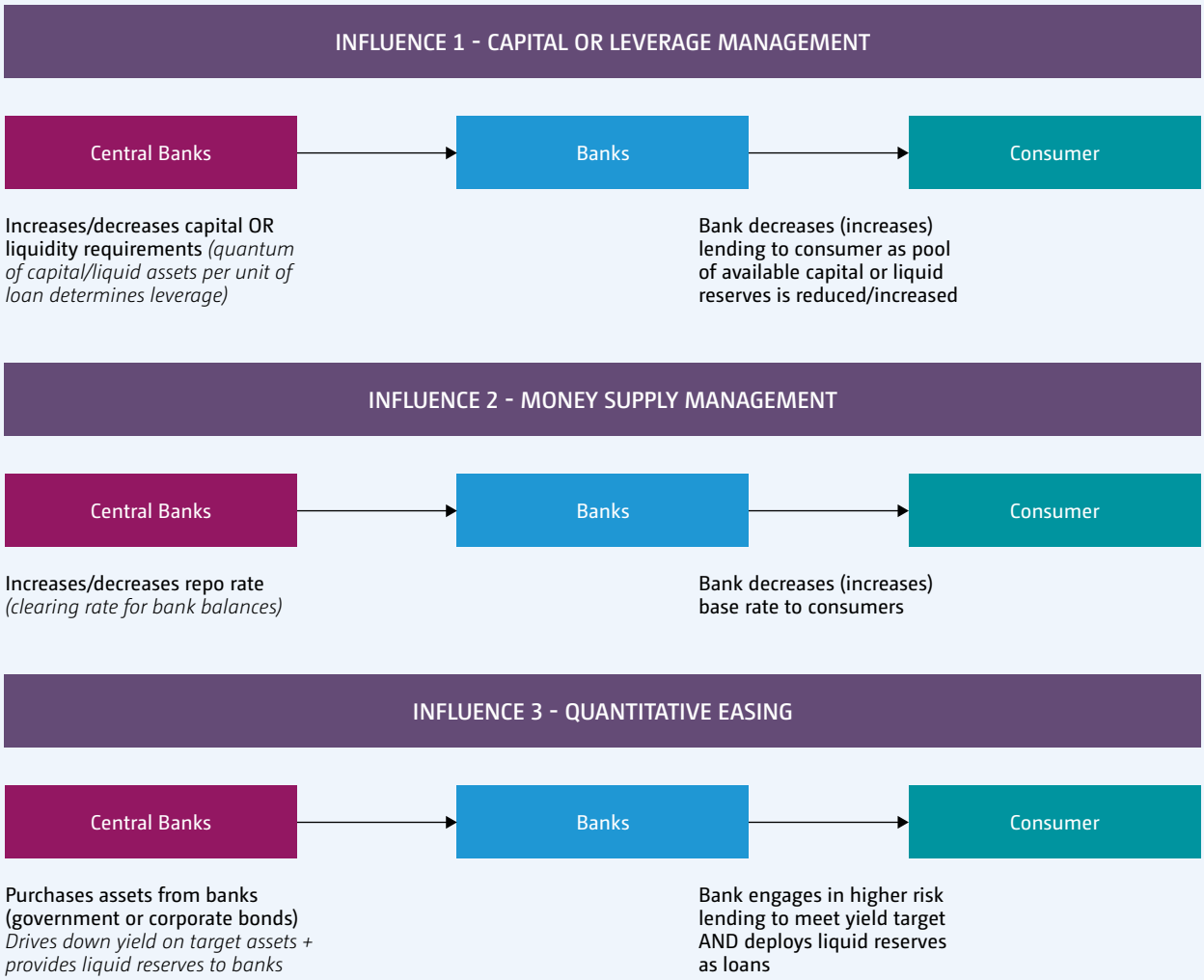
433. Regulatory actors and supervisor actors within or outside of central banks set regulations and standards that govern finance and investment flows and capital stock (see figure 4.6), which, coupled with monetary policy positions and operations of central banks, makes their response to climate action critical for supporting a pathway to low GHG emission and climate-resilient development.

434. The launch of the G20 Sustainable Finance Study Group under China's Presidency of the G20 in 2016 and its subsequent research culminated in a series of pioneering engagements by finance ministries and central banks on climate change. These early engagements have led to regulators and supervisors such as central banks acknowledging the direct risks

136) Available at https://www.gabv.org/about-us.

Figure 4.6

Central banks' influence over finance flows in the real economy



climate change poses to retaining financial stability in the economy. The climate risks are primarily framed as i) projected physical impacts of climate change (i.e. physical risk); and ii) effects on the economy of shifting towards a low-GHG climate-resilient development pathway (i.e. transition risk) (Scott et al., 2017).

435. Regional collaborations emerged post the signature of the Paris Agreement, for example, the Marrakech Pledge launched in 2016 and signed by 23 African capital market regulators, authorities and stock exchanges[137]. The initiative aims to "foster green capital markets in Africa" and work towards the rapid establishment of climate-resilient and innovative capital markets across the region.

436. Global coalitions among central banks were also established, primarily through the NGFS[138] launched at the One Planet Summit in December 2017. It represents a voluntary initiative by central bankers to strengthen the global response to climate change specifically focused on meeting the objectives of the Paris Agreement and to enrich the role of the financial ecosystem in managing environmental and climate risks. The NGFS facilitates the sharing and exchange of best practices; and commissions research related to its primary objectives. The membership of the NGFS as at 20th May 2020 included 66 members and 12 observers. In the first comprehensive report of the NFGS, the following priorities were highlighted for deeper engagement by its members:

137) Available at http://marrakechpledge.com/the-pledge/.
138) Further information available at: https://www.ngfs.net/en.

- Further research on **climate-related financial risks** in the financial system
- Development of **green/brown taxonomies** and analytical understanding of risk differentials
- In-depth analyses of **environment-related financial risks**
- **Financial models** that better capture the physical impact on the economy and financial stability
- **Scenario analysis**, interaction with mandates and monetary policy frameworks
- Development of **tools and methods** to assess risks
- Identification of **data problems**

437. A research network has also developed around the NGFS called the INSPIRE to support its members in advancing the above research priorities, which claims to ground its work in the political mandate of Article 2.1c.[139] The research priorities include further work relating to regulations, risk evaluation and policy assessment metrics for greening financial systems. The results of these recommendations will be available during 2021.

438. The oversight and engagement approaches by central banks include a focus on financial institutions (micro-prudential regulation) and a focus on economic systemic risks (macro-prudential regulation). Current efforts by central banks in each of these areas that engage with aligning with the aim of Article 2 of the Paris Agreement are described below.

Financial institutions (micro-prudential)

439. Micro-prudential concerns relate to the safety and soundness of financial institutions and to issues around risk-weighted capital, supervisory review and disclosure among such institutions of their risks to climate change and the broader financial stability implications. Stocktakes on existing regulatory and supervisory initiatives on climate-related financial risks in the banking system undertaken by the BCBS provide initial insights (BIS, 2020). These include:

- General recognition that climate change may result in risks that potentially destabilize the banking system.
- The majority of authorities consider it appropriate to address climate-related financial risks within their existing regulatory and supervisory framework.
- A large majority of members have conducted research on measurement of climate-related financial risks.
- A number of operational challenges exist in developing a robust framework to assess risks, including data gaps, methodological challenges and difficulties in mapping the transmission of climate risks to the banking system.
- The majority of authorities have taken measures to raise awareness of climate-related financial risks among banks.
- Approximately two fifths of BCBS members have issued, or are in the process of issuing, more principles-based guidance regarding climate-related financial risks.
- The majority of members have not factored, or have not yet considered factoring, the mitigation of climate related risks into the prudential capital framework.

440. Information on the extent to which climate-related financial risks are incorporated into the existing Basel Framework and effective supervisory practices to mitigate such risks would provide useful insights on tracking the consistency of the banking system with the Paris Agreement. However, such information may only become available in 2021.

Financial systems (macro-prudential)

441. Macro-prudential concerns relate to the aggregate climate risks across the entire economy (systemic risk), and its impact on financial stability, the resilience of the economy to climate effects and potentially steering the vision of what constitutes an economy that is consistent with a pathway towards low-GHG climate-resilient development. A stocktake on the integration of climate-related financial risks in financial stability monitoring undertaken by the FSB provided initial insights (FSB, 2020). These include:

- Around two thirds of financial authorities consider, or are planning to consider in future, physical, transition or other climate-related risks as part of their financial stability monitoring.
- Most focus on implications of changes in asset prices and credit quality. A minority of authorities also consider implications for underwriting, legal, liability and operational risks.
- Consideration of implications of credit and market risks faced by banks and insurance firms appears more advanced than that of other risks.
- Only a small number of authorities consider how such risks to the financial system might feed back to the real economy, thereby affecting the financial system; or to spillovers across borders or between financial sectors.

139) The research commissioned by INSPIRE to support the NGFS relate to i) micro-prudential regulation, disclosure, climate change and environment; ii) macro-prudential regulation, financial instability, climate change and environment; iii) evaluating risk differentials based on environmental factors; iv) monetary policy, direct and indirect monetary instruments, climate change and environment; v) sovereign bonds and climate- and environment-related risks; and vi) impact and effectiveness assessment of central bank and supervisory policies in greening the financial system.

- Some have quantified or have work under way to quantify climate-related financial risks. Such work is hindered by a lack of consistent data on financial exposures to climate risks and difficulties translating climate change outcomes into changes in those exposures. Approaches take two complementary forms: top-down and bottom-up.
- No approach to quantification that provides a holistic assessment of climate-related financial risks to the global financial system.
- In some jurisdictions, climate-related financial risks are being integrated in micro-prudential supervision of banks and insurance firms (including via requirements for stress testing and disclosures). Some authorities report on having set out – or are in the process of doing so – their expectations as to firms' disclosure of c-related risks.

442. Recent research cautions that *"climate change could trigger the next global financial crisis"* due to the underlying disruptive financial events it may evoke and the ill-suitedness of traditional backward-looking models that inform the policy positions of central banks (Bolton et al., 2020). Such financial events are referenced as "green swan risks" and may be pre-empted through forward-looking scenario-based analysis, and collective actions between central banks and other partners to advance mitigation and resilience policies, for example carbon pricing, sustainable banking practices and accounting, and developing new financial mechanisms. Collaborations among regulators and supervisors are emerging to co-operate around these issues.

443. Regulators and supervisors are applying a combination of approaches to align their activities with the Paris Agreement. Two examples are shared below, that of sustainable finance frameworks and climate stress testing.

Box 4.7

Sustainable finance frameworks

The Central Bank of the Philippines approved a sustainable finance framework in April 2020 to *"safeguard the financial system from the evolving material hazards of physical climate risk and transition risk including stranded assets"* (IEEFA, 2020). This framework requires that banks in the Philippines develop a transition plan with defined timelines to implement strategies and policies at board-approved level to integrate sustainability principles into their risk and governance frameworks. The transition plans for the banks complement the efforts of the Securities and Exchange Commission in the Philippines that released mandatory ESG reporting requirements for listed companies, and the ASEAN green bond standards issued in 2018. The Central Bank of the Philippines is one of the largest green bond issuers in South East Asia (ca. USD 2.02 billion as at mid-2020).

Other countries in the region are developing similar frameworks and road maps for sustainable finance, including Indonesia, Viet Nam, China, Japan and India (UNESCAP, 2020). For example, China, through its Bank Regulatory Commission, which requires banks (since 2007) to assess environmental risks in loan investment choices. The People's Bank of China has also issued criteria for projects to qualify under its green bond market.

Box 4.8

Climate stress testing

The Bank of France introduced laws for French banks and insurers to disclose their climate risks since 2016, and now will be required to conduct climate stress tests from 2021. The purpose of these tests is to identify their resilience to climate risks and to accelerate methodological work for furthering the quality of climate risk assessments[140]. These institutions would be stress tested against two or three climate scenarios (as determined by the Bank of France). Banks and insurers in France have also come under pressure from civil society and regulators to reduce their exposure to the coal industry. Specifically, the Governor of the Bank of France stated that *"it is absolutely necessary that the risk of financing coal plants is quickly reduced on French bank's balance sheets"* (Reuters, 2020).

The Bank of England and European Central Bank are also in the process of preparing and implementing climate stress tests for the banks and insurers under their jurisdiction. In the case of the Bank of England, testing will consider different combinations of physical and transition risks over a 30-year period (Sim, 2019).

140) Available at https://www.bloomberg.com/news/articles/2020-01-14/french-climate-stress-tests-for-financiers-to-be-anonymous.

444. The IMF considers its key role as supporting countries (its members) to analyse the risks and vulnerabilities and advising on macro-prudential policies, specifically the "macro-financial transition of climate risks". Through its Financial Sector Assessment Program, the IMF intends to support comprehensive analysis of member countries' financial sectors and their exposure to climate risks (which it also categorizes in the context of physical and transition risks) (Grippa et al 2020).

445. Stress testing is a key component of the IMF's assessment programme, as it captures the physical risks related to disasters (e.g. insurance losses and inability to pay loans due to climate disasters) – having already conducted such assessments for Jamaica and the Bahamas. Stress testing for transition risks is also under way, with the IMF concluding a recent study for Norway, identifying three possible channels for shocks to the financial system in Norway as a result of forced reductions of output in its oil sector (i.e. firm-level impacts, domestic economy, shareholder portfolios) (Grippa and Mann, 2020).

446. The **SBN** was among the first global knowledge networks to emerge focused on regulatory and banking agencies from developing countries. IFC has facilitated this voluntary network since September 2012 as a platform to advance sustainable finance at country level, shift national financial systems towards the twin goals of improved ESG risk management (including climate risk) and facilitate increased capital flows towards climate-related activities. The initiative has 39 members which represent USD 43 trillion (85 per cent) of banking assets in developing countries. Its measurement framework for assessing country member progress on sustainable financial systems includes efforts to align with climate goals and targets in NDCs. As at May 2020, 25 countries are accounted for as advancing sustainable finance reforms.

447. Civil society engagement with central banks and their contributions towards embedding environmental and social goals within such banks' mandates is also gaining traction. For example, civil society was invited to directly engage with the European Central Bank's strategy review in 2020. Criticism was levelled against the ECB's response to climate change, including how it applies the principle of market neutrality and highlighting the need for pricing in climate risk and ensuring no excessive capital allocations to the largest emitters.[141] Similar criticisms are also being levelled against central banks in other regions.

448. Some civil society and research organizations are actively calling for central banks to consider climate change risks in their monetary policy work, specifically assessing the climate impacts of quantitative easing (Monnin, 2018). These organizations are drawing attention to the inconsistency of central banks' commitment to assessing climate risks while applying monetary policies that boost fossil fuel companies (Mair, 2018). This call is supported by academic research which shows that the bond purchases of the Bank of England and European Central Bank between 2015 and 2016 (based on publicly available data) were skewed towards high-carbon sectors (Matikainen et al, 2018).

449. Further research also highlights that central banks in some developing countries such as Bangladesh, Brazil, China, Indonesia and the Republic of Korea have incorporated green policies within their central banking mandates progressively since 2007 (NEF, 2017). The measures taken by these countries include suppressing credit to certain climate-sensitive sectors, stress testing of lending activities and introducing green bonds in their collateral and macro-prudential policies.

4.3.4 Market operators

450. Market operators such as stock exchanges help facilitate financial transactions and through listing rules, disclosure mandates and other processes, help identify whether such transactions may be consistent with the goals of the Paris Agreement.

451. The Sustainable Stock Exchange initiative – with over 90 partner exchanges (out of 103) and over 350 collaborating organizations with over USD 86 trillion in market capitalization – aims to enhance ESG performance by building the capacity of stock exchanges and securities market regulators. The SSE reports that 24 exchanges had ESG reporting required as a listing rule, and 34 out of 103 stock exchanges had sustainability bond listing processes in 2020 (SSE, 2020).

452. The international network FC4S was launched in 2017 at the G7 Environment Ministers meeting to respond to the question as to how financial centres could contribute to the delivery of the SDGs and the Paris Agreement.[142] The network has grown from 12 to 30 members with USD 61.3 trillion in equity market capitalization, representing 80 per cent of the global equity market across five continents. Financial centres

141) Available at https://www.reuters.com/article/us-ecb-lagarde-idUSKBN276166.
142) Available at https://www.fc4s.org/about/.

differ in terms of institutional structure, mandates and size. The majority of members are public–private partnerships between industry and government to promote the city as a green or sustainable finance hub, while in other cities, industry-led associations have formed sustainable finance initiatives or the initiative is led by a municipal governing body itself. The FC4S conducts an annual assessment of members to track progress on the implementation of the green and sustainable finance agenda and the degree of capital provision (flows) in support of low-carbon transition and alignment with the Paris Agreement and the SDGs.

453. Several countries are also actively aspiring to be future "green finance hubs" in their respective regions – principally to attract climate-focused investment, though much is focused on investing in cleaner energy systems. In addition to the global financial centres in the United Kingdom and United States, aspirant green finance hubs are also arising in Morocco, Nigeria, Kazakhstan and South Africa (Chasan, 2020).

4.4 Insights from mapping information relevant to Article 2.1c

454. By end December 2020, the range of actions covered a broad spectrum of activities relevant for Article 2.1c – including developing investment and risk policies, climate-related financial instruments and asset classes, strong efforts on reporting and disclosure of investment portfolios (including exclusion policies relating to high-emission technologies). To elicit insights from the mapping exercise, the scope framework outlined in section 4.2 is revisited to provide a framing for understanding trends, issues and potential gaps in how information relevant to Article 2.1c is evolving.

Actions: Significant growth in relevant initiatives has been apparent since the Paris Agreement, particularly in coalitions fostering collective commitments on climate action

455. The mapping exercise illustrates how information and activities relevant to Article 2.1c, in many instances, are found in practices, coalitions or initiatives which pre-date the Paris Agreement itself. Policy and regulatory measures on green finance have been recorded since 1980, although there has been a marked increase since the Paris Agreement (see figure 4.7). This historical context is relevant as it provides evidence that even prior to the Paris Agreement, actors were developing sustainability and climate-related policy instruments and regulations which represent foundations for building responses to Article 2.1c that are also integrated with national development goals.

456. The Paris Agreement, however, triggered a precise focus whereby existing sustainability and climate finance initiatives sought to adopt objectives or activities that matched those of the Paris Agreement goals. At least 115 sustainable or climate-related financial initiatives exist that claim either direct or indirect association with the objectives of the Paris Agreement (Van Acker and Mancini, 2020; Egli et al., 2019; Hafner et al., 2019). Among these, the majority relate to promoting new financial instruments that address funding needs for sustainable development and climate change. A smaller pool of approximately 31 specifically focus on greening financial systems – for example, the UNEP Inquiry, the TCFD, the European Union High Level Expert Group on Sustainable Finance, and the Network for Greening the Financial System (Egli and Guido, 2019; Hafner et al., 2019).

457. Many activities across the stakeholder mapping which explicitly refer to achieving goals of the Paris

	Paris Agreement	Mapping scope
Actions	"Making finance flows"	Actions (voluntary and involuntary) implemented through different mechanisms (e.g. policy, regulation, new financial instruments, principles, actor-led coalitions, forms of development co-operation) that effect finance flows in any form to aid the purpose of Article 2.1c
Effects	"consistent with a pathway towards"	Actions that result in low GHG/carbon and climate resilient development, and actions that support shifts in finance flows away from unsustainable high GHG emission and low resilient development
Goal	"low greenhouse gas emissions and climate resilient development"	Relates to Article 2, including 2.1a and 2.1b, in the context of equity, and poverty eradication.

Figure 4.7

Number of green finance policy and regulatory measures and growth of selected initiatives since the adoption of the Paris Agreement

Note: Graph shows multiple increases in growth of initiatives since 2015 where 2015 values = 1. Where initiatives established after 2015, the initial year values are indexed to 1. Only initiatives with more than 3 annual datapoints represented.

Source: AIGCC, et al 2019; Climate Action 100+ 2020; Green Finance Platform, 2021; NGFS 2020; TCFD 2021.

Agreement and Article 2.1c are executed through collective initiatives and organizations. This highlights the importance of network effects, knowledge-sharing and promoting practices of financial sector actors who wish to contribute to achieving the Paris Agreement goals. These networks enable peer exchanges, facilitate collective learning, opportunity for experimental and innovative exchanges and common goal setting.

458. In contrast, relatively few relevant actions by national governments frame their actions in the context of Article 2.1c. Particularly in developing countries, the ability to access international climate finance in the context of Article 9 is mentioned as well as directing domestic finance flows to achieving NDC goals.

Actions: The assessment of the real-world contributions and the risk of greenwashing remains a challenge

459. Several researchers highlight the absence of any independent critique of the motives and impacts of the numerous finance-related initiatives that have emerged since the adoption of the Paris Agreement. Such critical engagement will be essential as countries shift focus to implementation and resource mobilization. It will assist in assessing the real-world contributions of these many initiatives towards achieving consistency of finance flows and combating greenwashing in this context. Further, a plethora of initiatives offers the potential for incoherence and different levels of ambition in articulating how Article 2.1c goals may be met.

460. The most recent initiatives include efforts of respective stakeholders to align with net zero or 1.5

°C pathways, with commitments on target setting and reporting brought to the fore, in contrast to earlier initiatives focused on advocacy and high-level commitments. The role of broader forums such as GFANZ in this instance is welcome to ensure a race to the top is pursued in how efforts relevant to achieving the goal in Article 2.1c are communicated and acted on.

Actions: Trend toward more stringent minimum requirements or mandatory regulations over voluntary activities

461. Actors are largely adopting approaches in line with their institutional mandates, geographic reach and interpretation of how climate risks and opportunities impact and benefit their operations directly. To date, initiatives with the most coverage and scope among financial actors are voluntary in nature, with often non-prescriptive commitments to principles. More recently, some initiatives are including mandatory implementation requirements against common timelines. Furthermore, some governments already signal mandatory exclusions or obligations being placed on the institutions although these remain limited in number and geographic scope.

Actions: More work needed to promote inclusivity and geographic representation

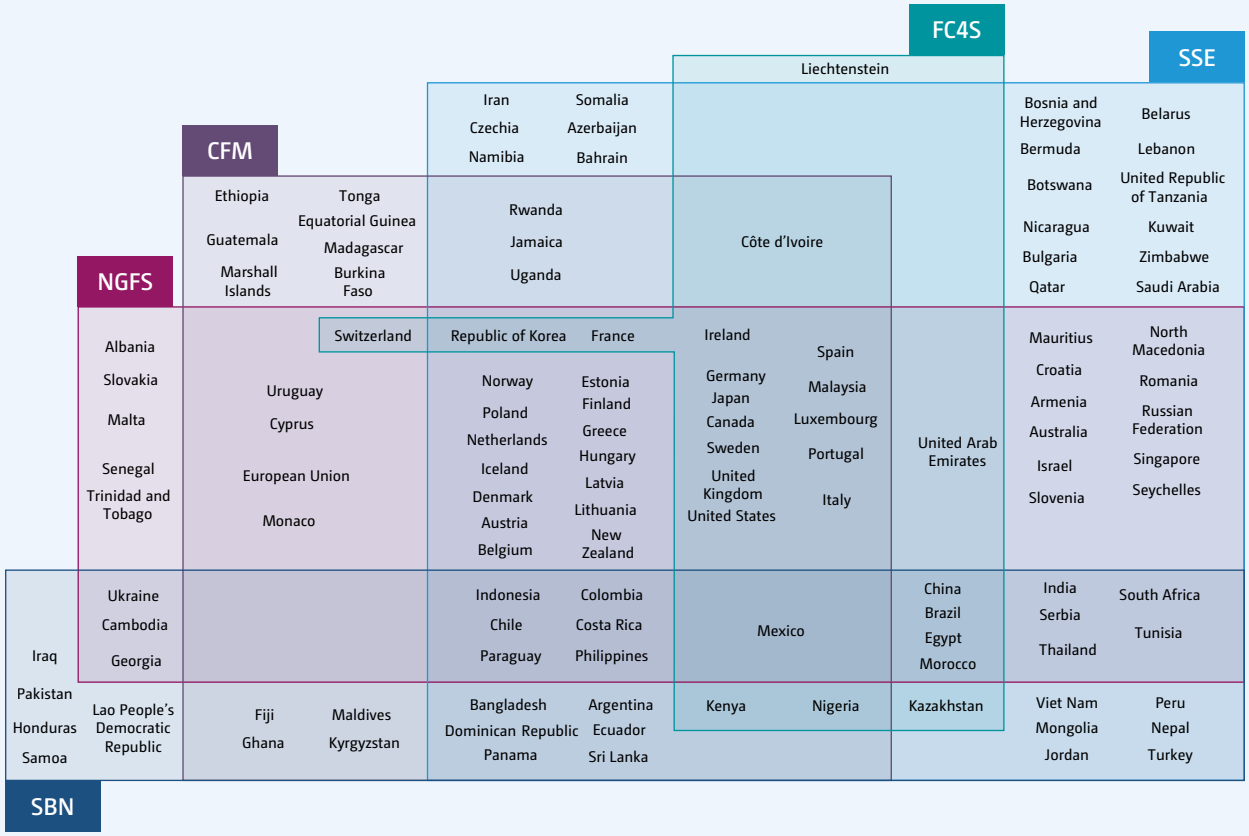
462. The mapping includes a number of initiatives relevant to Article 2.1c with representation across regions including both developed and developing countries. For private finance actors, such representation is important but also reveals how different relative starting points, capacity and skills gaps are within coalitions that make common commitments. For example, the members of the UNEP Commitment on Climate Change Action of commercial banks report representation across six regions but with significant differences in the ability of banks to respond to the aims of the commitment (UNEP FI, 2020b).

463. Further, although there are a significant number of different relevant initiatives, many have yet to combine networks to considered effect. Of the 115 partnerships identified of relevance to supporting the goals of the Paris Agreement, including up to 5,181 constituent members, the vast majority – 75 per cent – are connected to only one partnership.

464. Inclusive and broad geographic representation is even more critical among initiatives responding to the goal of Article 2.1c targeted at public finance actors, regulators and other country-focused actors such as financial centres. In these forums it is important to ensure perspectives of different regions, financial systems and country priorities are reflected in how common goals are articulated, particularly as the activities of these actors support and facilitate the achievement of Article 2.1c as well as their country NDCs. The country representation of five such initiatives – the Coalition of Finance Ministers for Climate Action, the Network for Greening the Financial System, the Sustainable Banking Network, the Sustainable Stock Exchange and Finance Centres for Sustainability – are mapped in figure 4.8. Each individual initiative has global coverage in representation but an examination of overlaps reveals that more efforts are needed to ensure adequate participation of developing countries, particularly in initiatives focused on governments. Only one country – Mexico – is a member of all five initiatives, while most countries with multiple coverage are in developed markets. There remains significant potential to include a broader number of emerging and developing countries involved in both the SBN and/or SSE.

Figure 4.8

Country representation overlaps among five sustainable finance initiatives, as of end of 2020



Source: Based on review of membership pages of each organization websites.

Effects: Espousing "alignment" or "consistency" in responding to the goal in Article 2.1c

465. The dominant framing of engagement by actors (public, private, regulatory and contributory) is that of "aligning" their operations and practices with the Paris Agreement. Precise references to Article 2.1c's framing of "consistency" is rarely mentioned, with the exception of the members of the IDFC (development banks) and the MDBs in reference to consistency with national development pathways compatible with the objectives of the Paris Agreement. The framing of "alignment" in reference to Article 2.1c is also dominant among the broader UN-led investor and banking initiatives and related multilateral agencies.

466. A feature of "Paris alignment" approaches from MDBs and DFIs is how they aim to respond to multiple aspects of the Paris Agreement, broader than finance flows and the goals in Article 2, but also support for NDCs and adaptation plans (Articles 4 and 7), scaling up and mobilizing climate finance (Article 9), supporting capacity development, technology transfer and technical assistance (Articles 10 and 11) and market mechanisms (Article 6). The consistency of finance flows, as per Article 2.1c, features more specifically in references to understand which individual financing decisions may be considered consistent with Paris Agreement goals and NDCs.

467. Private finance initiatives and approaches appear to view alignment and consistency as interchangeable, taking for example the view that alignment to specific 1.5 °C or net zero pathways over the long term reflects how finance allocation decisions can be consistent, while civil society and researchers in general focus on how Article 2.1c consistency framing broadens the climate finance lens from a focus solely on financing climate solutions to also a focus on negating financing

of inconsistent activities, including fossil fuel or deforestation-related investments, subsidies and other finance flows.

468. Finance ministries and central banks for example could require that financial sector actors develop strategies and milestones for achieving consistency across their operations. Precedents in the financial sector for creating such strategies exist, for example global application of the Basel regulatory guidelines on capital adequacy, and stress testing.

Effects: Pursuing consistency requires consideration of how finance targeted at current high-GHG activities can support pathways

469. A focus on individual "consistent" financing or investment decisions is not straightforward due to the significant potential range of what pathways may be followed for achieving the broader goals in Article 2 (see section 1.6 for examples of reference pathways in use by different methodologies). The trend toward developing climate, green or sustainable finance taxonomies, as seen across multiple public actor initiatives, can support identification of "consistent" activities, but may risk excluding necessary investment in high GHG emission sectors or activities to support a transition to the pathway overall. These may be in areas where "consistent" activities are not yet available at scale due to technological innovation (e.g. steel and/or cement processes), where activities are needed to enable a transition (e.g. financing of mining activities, road building), or where financing is needed to wind down or responsibly manage retiring high GHG emission activities and transition communities away from their reliance (e.g. coal phase-out policies and subsidies).

470. Transition finance taxonomies are being developed for private finance actors. For example, "transitional activities" in the context of financing just transition implies projects that can meet certain conditions, such as i) displace more carbon-intensive options compared to industry norms; and ii) enable wider application or integration of less carbon-intensive options. Some countries have begun developing specific guidelines to finance transitional activities. For example, in Singapore the DBS bank is pioneering a Sustainable and Transition Finance taxonomy, which offers institutional clients specific finance to shift towards incorporating climate change and the SDGs into their business processes (DBS, 2020). In Japan, policymakers have commissioned research for defining two transition-related taxonomies – being standards for financing corporates and individual business activities to support the transition to low GHG emission and climate-resilient development (RIEF, 2020). The Canadian Government has also announced a decision to develop transition finance taxonomies to ensure that the climate response is linked to just transition imperatives (CSA, 2020).

471. The issuance of transition bonds and associated guidelines is also evident since 2015, with the first transition bond launched in 2019, aimed at promoting decarbonizing opportunities among carbon-intensive actors (Axa, 2019). Further research aims to delineate how transition labels align finance flows with the Paris Agreement goals, to advance the creation of new asset classes to support decarbonization efforts (CBI, 2020c).

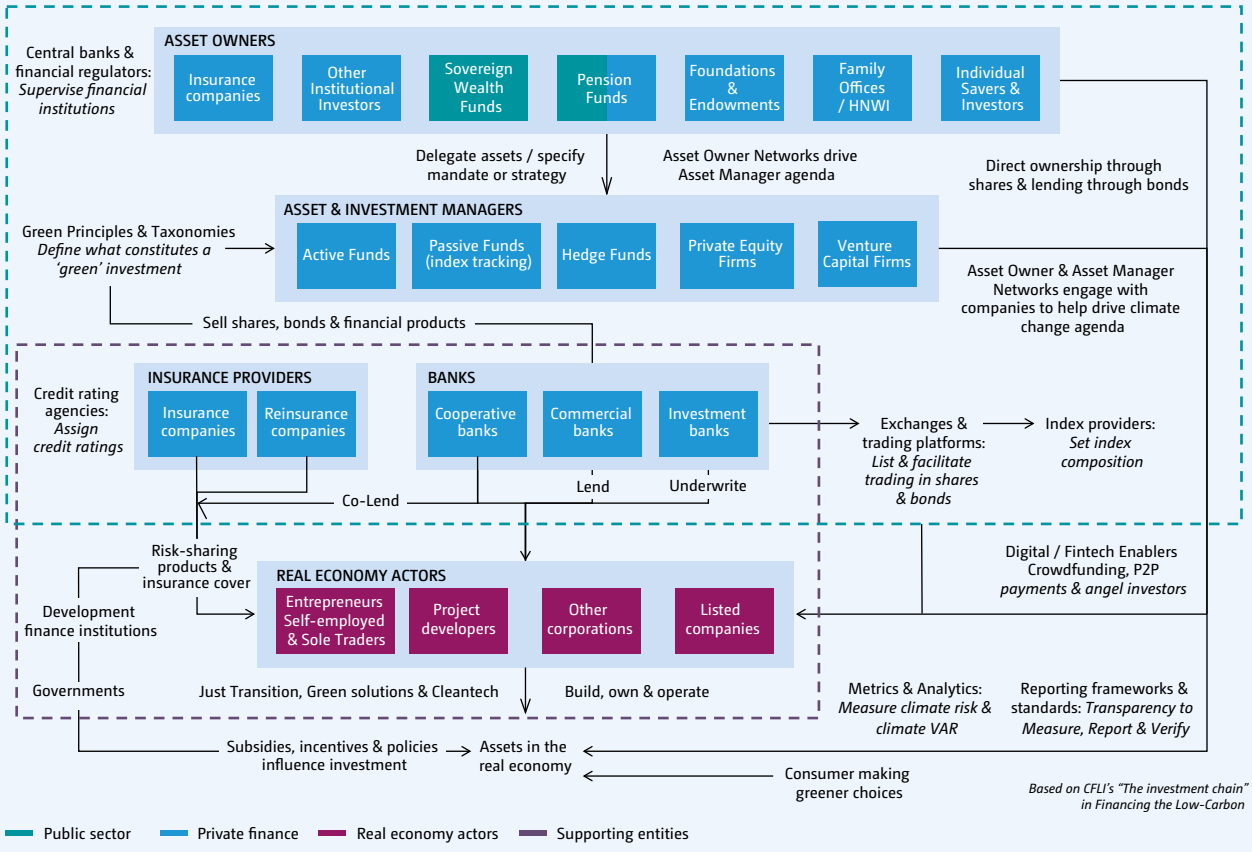
Goals: Achieving and reporting on impacts in the real economy

472. Engagement with Article 2.1c is widespread across all actors within the financial sector, with actions concentrated on defining their exposure to climate risks, and the economic opportunities linked to climate response measures. However, achieving the goal outlined in Article 2.1c related to low GHG emissions and climate-resilient development, set in the context of Article 2, comes down to real economy actions which reduce emissions in line with temperature goals and develop climate resilience. Many actors in the financial sector operate at a number of steps removed from real economy activities either through stock or bond trading, portfolio allocations, or micro-prudential supervision, that have little direct effect on real economy investment decisions, relative to banks lending to projects, corporations approving capital expenditure plans or governments announcing support incentives. Therefore, measuring the effective role of financial actors, in the context of Article 2.1c, is notable as a topic of debate among initiatives, including to which degree which metrics are most important as indicators of success (see section 1.6).

473. Focusing more specifically on the underlying goal of Article 2.1c and the actors' *contribution and creation of* new development pathways may expand the scope of their engagement more significantly and contribute to the raised ambition for achieving the Paris Agreement goals. This may require more systemic approaches by financial sector actors, including engaging relationally (i.e. how each actor's interventions complement and relate to those of other actors) (Oliver et al., 2018; Van Acker and Mancini, 2020; Naidoo, 2020). The illustration in figure 4.9 connects a wider range of actor segmentations to financial instruments, and how their management of finance flows contributes to the real economy.

Figure 4.9

Connecting actors with their actions and real economy contributions



Goals: Further consideration of climate-resilient development

474. The approaches described in section 4.3 have a strong focus on actions linked to achieving Article 2.1a of the Paris Agreement, that is financing low greenhouse gas related investments, and mitigating the physical and transition related risks of shifting from high- to low-GHG development trajectories. There appears limited evidence of the degree to which financial actors are aligning their investment mandates with the resilience goals linked to Article 2.1b of the Paris Agreement. One view relates to how the focus on proper climate-related risk disclosure should result in better, more resilient investment and financing decisions as an end in and of itself. Other initiatives have recognized the existing gaps in guidance and understanding on how to proactively engage on this element, such as the Paris Alignment Investment Initiative.

4.5 Considerations for advancing efforts relevant to Article 2.1c

4.5.1 Policy and public finance actions

475. In the policy sphere, considerations for advancing efforts relevant to Article 2.1c in the short term may be hindered by a lack of guidance, process or mandate. Other long-term goals as set out in Article 2.1a and 2.1b are linked to shorter-term processes such as NDC and NAP submission cycles. Two recent policy developments offer an opportunity to promote understanding and perspectives on how Article 2.1c specifically may be followed through at national level in the short run, for example through tracking the consistency of public finance response for post-COVID-19 sustainable recoveries, and in the long run, for example identifying and strategizing ways to finance net zero targets and

implementation plans and including these in long-term low-emission development strategies.

COVID-19 pandemic and recovery measures

476. Since early 2020, the COVID-19 health pandemic is severely impacting countries' ability to respond to climate action. The UN Environment Programme also highlights concerns that due to COVID-19, "green" investment may be stymied in the short term, and suggests various policy and market levers to enable a "green" global economic recovery (McDaniels, 2020). The UN Secretary-General is encouraging countries to utilize the COVID-related social and economic recovery plans as an opportunity to build a "foundation for a safe, healthy, inclusive and more resilient world for all people". Three of the critical actions proposed by the UN Secretary-General to support a climate-positive recovery directly relate to Article 2.1.c. – specifically, i) using public finances to facilitate the shift towards a decarbonized and resilient economy, ii) ensuring future public finance supports projects that aid the environment and climate response, and iii) identifying risks and opportunities for individual countries as the global financial system is shaping policy responses to the pandemic.

477. The COVID-19 pandemic is also drawing attention to allocations of public finance flows towards climate change. The rationale is that recovery measures for COVID-19 offer insights on two levels. Firstly, how may the recovery measures contribute to low GHG emission and climate-resilient development; and secondly, whether recovery measures "do no harm" (i.e. tracking whether response measures are reversing positive climate actions). Research analysing the response packages to COVID-19 and their contribution to climate action identified 21 per cent of USD 2.25 trillion of recovery spending (USD 460 billion) in green spending (O'Callaghan et al, 2021).

478. Related research shows that the stimulus package for COVID-19 is coupled directly with the goals of Article 2, that is climate change, sustainable development and the eradication of poverty. This is through calls for recovery processes that complement "green recovery" (emissions and resilience), with a specific focus on critical water shortages, heightened investment in health care and other care industries, and on reducing growing social inequalities (Ghosh, 2020). The enabling factor cited by researchers to achieve a comprehensive approach to climate change and the COVID pandemic appears to be *"a robust international framework to control financial and capital flows, as well as revised rules for trade, cross border investment and intellectual property rights"*. Further, for the stimulus packages to both contribute and do no harm towards long-term climate responses, a portfolio of actions is necessary (Thwaites, 2020, Carbon Brief 2020), being; i) corporate bailouts with green conditionalities; ii) investment in nature-based solutions; iii) loans and grants for green investments; iv) subsidies or tax reductions for green products (and removal of subsidies for polluters); v) green research and development grants; and vi) upholding positive environmental regulations.

Net zero target setting

479. Another key development since the adoption of the Paris Agreement is the setting of time-based "net zero" emission targets by certain countries. Such targets represent these countries' commitment to halt new GHG emissions, and/or absorb an equivalent amount of GHG emissions from the atmosphere. By setting dates for reaching net zero, even in the long run, countries provide actors with greater certainty on what may be a narrower range of pathways consistent with the target, and therefore clearer guidance on the time frame and types of "consistent" investment decisions. 134 countries have committed to carbon neutrality or net zero targets, 90 per cent by 2050. Notwithstanding two countries – Bhutan and Suriname – which have achieved carbon neutrality, 12 countries have legislated net zero targets, and a further four countries have proposed legislation. 37 counties have announced net zero targets as policies, while the remainder (59 per cent) are discussing how to set a net zero target.[143]

480. The submission of LT-LEDS could offer a vehicle for countries to articulate their response to achieving the long-term goals set out in Article 2.1c, with net zero targets offering further clarity on how this can be achieved.

4.5.2 Financing just transition

481. The Paris Agreement references the imperative of implementing the goals through a "just transition of the workforce, and the creation of decent and quality jobs". Since 2015, as countries shift into implementation mode for their climate plans, the focus on just transition is increasing – and particularly ensuring that the benefits

143) Available at https://eciu.net/netzerotracker, as of August 2021.

and costs of climate action are fairly shared among all. Financial sector actors are regarded as important contributors to financing climate action in a just and equitable manner (framed as just transition). The growing momentum on just transition in practical terms reveals a need for integrating this imperative into how finance is deemed "consistent" in advancing and tracking progress on Article 2.1c in future.

482. Understanding the role of financial sector actors in "just transition" is the subject of a multi-partner initiative among academic and financial sector partners in South Africa and India.[144] Partners are working to develop just transition finance road maps for India and South Africa, which aims to direct future investment towards achieving fairly distributing social and economic benefits – taking the view that climate response relates to a "whole economy approach" not only specific sectors.[145]

483. Multilateral efforts associating climate responses with just transition is also growing. For example, the Just Transition Initiative co-developed by the CIFs aims to analyse the CIF's investment portfolio to understand the dimensions of just transition, while developing knowledge products to encourage engagement such as the Framework for Just Transition Definitions.[146] Further, the World Bank is supporting a platform initiative to support "coal regions in transition" in Ukraine and the Balkans and facilitate sharing experience with regions that have made the transition to low-carbon energy systems. OECD research highlights just transition related policy options such as carbon pricing, regulations, policies for skills and labour, and accounting for distributional impacts of transition (gender, age, geographically vulnerable communities) (Just Transition Centre, 2017, Botta, 2018).

484. The principles behind just transition of fairly distributing burdens and benefits is also relevant in the international context and through the references to equity in Article 2. Where countries are economically dependent on fossil-fuel industries and energy sources, the policies of trade partners may affect inward investments and/or access for export markets. Further, vulnerabilities to climate impacts may reduce access to capital for countries seen at most risk, as better data and awareness of climate-related risks are integrated into investor portfolios (see section 3.4.4). The V20 Group, for example, offers useful insights and mechanisms on insurance, macro-financial risks, financial protection, enabling access to affordable finance to grow small and medium businesses, and its climate prosperity plans (MCII/V20, 2020).

4.5.3 Relevance to Article 9 of the Paris Agreement

485. Article 9 of the Paris Agreement confirms the obligation of developed countries towards developing countries being the provision of resources *"in continuation of their existing obligations under the Convention"* – where such resources come from a *"variety of sources, instruments and channels, noting the significant role of public funds"*. Such sources are largely managed by different actors whose actions may either directly or indirectly contribute towards achieving the Paris Agreement goals.

486. The relationship, if any, between Article 2.1c and Article 9 is, however, not defined in the Paris Agreement. However, concepts included in Article 2.1c are referred to in subsequent CMA decisions (e.g. 12/CMA.1 on information to be provided by Parties in accordance with Article 9, paragraph 5, of the Paris Agreement and 14/CMA.1 on setting a new collective quantified goal on finance in accordance with decision 1/CP.21, paragraph 53).

487. The EU, in its biennial communication on Article 9.5 of the Paris Agreement on indicative quantitative and qualitative information on the provision of climate finance, outlined how supporting developing countries in meeting the Paris Agreement goals through capacity-building and technical assistance for fiscal and macroeconomic policymaking will help them identify and mobilize domestic resources for climate action and attract international climate finance that can fulfil their investments needs. In this context, it was noted that Article 9 and Article 2.1c are neither interchangeable nor mutually exclusive but reinforce each other.

488. As the mapping shows, and as noted above, few national governments have framed the relevant actions related to Article 2.1c – such as the development of taxonomies, disclosure frameworks, fiscal support regimes, and exclusion policies – as responses to Article 2.1c directly. Developing countries largely emphasize

144) Available at https://www.polity.org.za/article/project-launched-to-define-role-of-finance-in-south-africa-and-indias-just-transitions-2021-01-19.
145) Available at https://www.lse.ac.uk/granthaminstitute/events/just-transition-finance-roadmaps-in-south-africa-and-india-project-launch/
146) Available at https://www.climateinvestmentfunds.org/topics/just-transition.

their ability to access international climate finance in the context of Article 9 as well as directing domestic finance flows to achieving NDC goals.

489. The mapping exercise illustrates how actors that are typically involved in climate finance flows under Article 9, such as bilateral agencies, DFIs, multilateral climate funds and MDBs, are also adopting measures/activities on aligning with the Paris Agreement and/or being consistent with Article 2.1c. Such efforts however, also include scaled-up provision and mobilization of climate finance as part of "alignment"' efforts. Such efforts to follow through on Article 2.1c may need to ensure these actors retain a focus on meeting the needs and priorities of developing countries.

490. Presently, the mapping shows that most actors have well advanced financial innovations and niche asset classes to advance finance for climate-related projects and programmes, though shortcomings still exist. The financial mechanisms of the UNFCCC (via climate finance) have mainly focused on project-level support, promoting technical assistance for mitigation, adaptation and resilience goals. This focus could benefit from being broadened in the context of assessing progress on consistency and shifts to low-emission and climate-resilient development pathways as per Article 2.1c.

491. Future discussions, for example on the new quantified goal and the global stocktake, may facilitate discussions among Parties on how relevance and association between Article 2.1c and Article 9 may be pursued.

4.5.4 Future mapping of progress towards Article 2.1c

492. Different actors across a range of countries have signed up to initiatives to align their finance practices and flows with the Paris Agreement goals, some of which overlap at country level, as illustrated in figure 4.8. Over time, these initiatives will begin to take effect, evidenced by how they are contributing towards the Paris Agreement goals and country-specific climate goals (e.g. contribution towards NDCs and adaptation plans). The initiatives being taken are important in terms of individual actors, and equally important is how such actions are complementary relative to other actors. For example, countries' market makers, finance ministries and central banks align their individual actions to the Paris Agreement goals, while also focusing on how their actions complement the relative actions being taken by each other. Such interconnectedness among different actors is already emerging in practice, and offers a chance to track collective progress towards Article 2.1c being achieved in a national context.

493. The scoping approach developed for the mapping exercise in this chapter uses the lens of "actions, effects and goals" and applies these to different actors, particularly actors directly or indirectly influencing finance flows. This approach offered an initial lens to document the practices being adopted by different national actors. It may be a useful starting point for countries to apply at a national level, especially to understand the effects of the different actors (i.e. how are they influencing/contributing to the goals of Article 2.1c). The Paris Agreement recognizes that the financing shifts will happen over time, therefore it may be useful for countries to also consider base-year/ baseline indicators for tracking the progress of different actors to show movement over time of the real world outcomes of any actions – towards making finance flows consistent over time.

ANNEXES

Annex A: Country and institution groupings used in the fourth biennial assessment and overview of climate finance flows (2020)

Annex I Parties (43)	Annex II Parties (24)	OECD member countries (37)	DAC members (30)
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
Belarus	Belgium	Belgium	Belgium
Belgium	Canada	Canada	Canada
Bulgaria	Denmark	Chile	Czechia
Canada	EU	Colombia	Denmark
Croatia	Finland	Czechia	EU
Cyprus	France	Denmark	Finland
Czechia	Germany	Estonia	France
Denmark	Greece	Finland	Germany
Estonia	Iceland	France	Greece
EU	Ireland	Germany	Hungary
Finland	Italy	Greece	Iceland
France	Japan	Hungary	Ireland
Germany	Luxembourg	Iceland	Italy
Greece	Netherlands	Ireland	Japan
Hungary	New Zealand	Israel	Luxembourg
Iceland	Norway	Italy	Netherlands
Ireland	Portugal	Japan	New Zealand
Italy	Spain	Latvia	Norway
Japan	Sweden	Lithuania	Poland
Latvia	Switzerland	Luxembourg	Portugal
Liechtenstein	United Kingdom of Great Britain and Northern Ireland	Mexico	Republic of Korea
Lithuania	United States	Netherlands	Slovakia
Luxembourg		New Zealand	Slovenia
Malta		Norway	Spain
Monaco		Poland	Sweden
Netherlands		Portugal	Switzerland
New Zealand		Republic of Korea	United Kingdom of Great Britain and Northern Ireland
Norway		Slovakia	United States
Poland		Slovenia	
Portugal		Spain	
Romania		Sweden	
Russian Federation		Switzerland	
Slovakia		Turkey	
Slovenia		United Kingdom of Great Britain and Northern Ireland	
Spain		United States	
Sweden			
Switzerland			
Turkey			
Ukraine			
United Kingdom of Great Britain and Northern Ireland			
United States			

Non-Annex I Parties (154)				
Afghanistan	Congo	Iran (Islamic Republic of)	Nauru	Somalia
Albania	Cook Islands	Iraq	Nepal	South Africa
Algeria	Costa Rica	Israel	Nicaragua	South Sudan
Andorra	Côte d'Ivoire	Jamaica	Niger	Sri Lanka
Angola	Cuba	Jordan	Nigeria	State of Palestine
Antigua and Barbuda	Democratic People's	Kazakhstan	Niue	Sudan
Argentina	Republic of Korea	Kenya	North Macedonia	Suriname
Armenia	Democratic Republic of	Kiribati	Oman	Syrian Arab Republic
Azerbaijan	the Congo	Kuwait	Pakistan	Tajikistan
Bahamas	Djibouti	Kyrgyzstan	Palau	Thailand
Bahrain	Dominica	Lao People's Democratic	Panama	Timor-Leste
Bangladesh	Dominican Republic	Republic	Papua New Guinea	Togo
Barbados	Ecuador	Lebanon	Paraguay	Tonga
Belize	Egypt	Lesotho	Peru	Trinidad and Tobago
Benin	El Salvador	Liberia	Philippines	Tunisia
Bhutan	Equatorial Guinea	Libya	Qatar	Turkmenistan
Bolivia (Plurinational	Eritrea	Madagascar	Republic of Korea	Tuvalu
State of)	Eswatini	Malawi	Republic of Moldova	Uganda
Bosnia and Herzegovina	Ethiopia	Malaysia	Rwanda	United Arab Emirates
Botswana	Fiji	Maldives	Saint Kitts and Nevis	United Republic of
Brazil	Gabon	Mali	Saint Lucia	Tanzania
Brunei Darussalam	Gambia	Marshall Islands	Saint Vincent and the	Uruguay
Burkina Faso	Georgia	Mauritania	Grenadines	Uzbekistan
Burundi	Ghana	Mauritius	Samoa	Vanuatu
Cabo Verde	Grenada	Mexico	San Marino	Venezuela (Bolivarian
Cambodia	Guatemala	Micronesia (Federated	Sao Tome and Principe	Republic of)
Cameroon	Guinea	States of)	Saudi Arabia	Viet Nam
Central African Republic	Guinea-Bissau	Mongolia	Senegal	Yemen
Chad	Guyana	Montenegro	Serbia	Zambia
Chile	Haiti	Morocco	Seychelles	Zimbabwe
China	Honduras	Mozambique	Sierra Leone	
Colombia	India	Myanmar	Singapore	
Comoros	Indonesia	Namibia	Solomon Islands	

List of ODA Recipients (138)

Afghanistan	Côte d'Ivoire	Iran (Islamic Republic of)	Namibia	Sri Lanka
Albania	Cuba	Iraq	Nauru	State of Palestine
Algeria	Democratic People's	Jamaica	Nepal	Sudan
Angola	Republic of Korea	Jordan	Nicaragua	Suriname
Antigua and Barbuda	Democratic Republic of	Kazakhstan	Niger	Syrian Arab Republic
Argentina	the Congo	Kenya	Nigeria	Tajikistan
Armenia	Djibouti	Kiribati	Niue	Thailand
Azerbaijan	Dominica	Kyrgyzstan	North Macedonia	Timor-Leste
Bangladesh	Dominican Republic	Lao People's Democratic	Pakistan	Togo
Belarus	Ecuador	Republic	Palau	Tonga
Belize	Egypt	Lebanon	Panama	Tunisia
Benin	El Salvador	Lesotho	Papua New Guinea	Turkey
Bhutan	Equatorial Guinea	Liberia	Paraguay	Turkmenistan
Bolivia (Plurinational	Eritrea	Libya	Peru	Tuvalu
State of)	Eswatini	Madagascar	Philippines	Uganda
Bosnia and Herzegovina	Ethiopia	Malawi	Republic of Moldova	Ukraine
Botswana	Fiji	Malaysia	Rwanda	United Republic of
Brazil	Gabon	Maldives	Saint Kitts and Nevis	Tanzania
Burkina Faso	Gambia	Mali	Saint Lucia	Uzbekistan
Burundi	Georgia	Marshall Islands	Saint Vincent and the	Vanuatu
Cabo Verde	Ghana	Mauritania	Grenadines	Venezuela (Bolivarian
Cambodia	Grenada	Mauritius	Samoa	Republic of)
Cameroon	Guatemala	Mexico	Sao Tome and Principe	Viet Nam
Central African Republic	Guinea	Micronesia (Federated	Senegal	Yemen
Chad	Guinea-Bissau	States of)	Serbia	Zambia
China	Guyana	Mongolia	Sierra Leone	Zimbabwe
Comoros	Haiti	Montenegro	Solomon Islands	
Congo	Honduras	Morocco	Somalia	
Cook Islands	India	Mozambique	South Africa	
Costa Rica	Indonesia	Myanmar	South Sudan	

LDCs, as of 2018 (47)

Afghanistan	Comoros	Kiribati	Myanmar	Sudan
Angola	Democratic Republic of	Lao People's Democratic	Nepal	Timor-Leste
Bangladesh	the Congo	Republic	Niger	Togo
Benin	Djibouti	Lesotho	Rwanda	Tuvalu
Bhutan	Eritrea	Liberia	Sao Tome and Principe	Uganda
Burkina Faso	Ethiopia	Madagascar	Senegal	United Republic of
Burundi	Gambia	Malawi	Sierra Leone	Tanzania
Cambodia	Guinea	Mali	Solomon Islands	Vanuatu
Central African Republic	Guinea-Bissau	Mauritania	Somalia	Yemen
Chad	Haiti	Mozambique	South Sudan	Zambia

SIDS that are Member States of the United Nations (38)

Antigua and Barbuda	Grenada	Mauritius	Saint Vincent and the	Tuvalu
Belize	Guinea-Bissau	Micronesia (Federated	Grenadines	Vanuatu
Cabo Verde	Guyana	States of)	Samoa	Bahamas
Comoros	Haiti	Nauru	Sao Tome and Principe	Bahrain
Cuba	Jamaica	Palau	Solomon Islands	Barbados
Dominica	Kiribati	Papua New Guinea	Suriname	Seychelles
Dominican Republic	Maldives	Saint Kitts and Nevis	Timor-Leste	Singapore
Fiji	Marshall Islands	Saint Lucia	Tonga	Trinidad and Tobago

Regional Groupings

International Development Finance Club – regional groupings

East Asia and the Pacific	Eastern Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia
American Samoa, Cambodia, China, Democratic People's Republic of Korea, Fiji, Indonesia, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia (Federated Sates of), Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu and Viet Nam	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kosovo,[a] Kyrgyzstan, Montenegro, North Macedonia, Republic of Moldova, Russian Federation, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan	Antigua and Barbuda, Argentina, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Uruguay and Venezuela (Bolivarian Republic of)	Algeria, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Morocco, State of Palestine, Syrian Arab Republic, Tunisia and Yemen	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka

Source: https://www.idfc.org/Downloads/Publications/01_green_finance_mappings/IDFC_Green_Finance_Mapping_Report_2017_12_11.pdf

a. This designation is without prejudice to positions on status, and is in line with United Nations Security Council resolution 1244 and the International Court of Justice Opinion on the Kosovo Declaration of Independence.

MDBs – regional groupings

EU-12	Latin America and the Caribbean	Middle East and North Africa	South Asia	Non-EU Europe and Central Asia	Sub-Saharan Africa
Bulgaria, Croatia, Cyprus, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia	Anguilla, Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Bonaire, Sint Eustatius and Saba, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Saint Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay and Venezuela (Bolivarian Republic of)	Algeria, Bahrain, Egypt, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, Tunisia, United Arab Emirates, Western Sahara and Yemen	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kosovo,[a] Kyrgyzstan, Montenegro, North Macedonia, Republic of Moldova, Russian Federation, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan	Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Togo, Uganda, United Republic of Tanzania, Zambia and Zimbabwe

Source: http://www.ebrd.com/2018-joint-report-on-mdbs-climate-finance

a. This designation is without prejudice to positions on status, and is in line with United Nations Security Council resolution 1244 and the International Court of Justice Opinion on the Kosovo Declaration of Independence.

OECD – regional groupings								
Europe	**Far East Asia**	**Middle East**	**North and Central America**	**North of Sahara**	**Oceania**	**South and Central Asia**	**South America**	**South of Sahara**
Albania, Belarus, Bosnia and Herzegovina, Europe (regional), Kosovo,[a] Montenegro, North Macedonia, Republic of Moldova, Serbia, States Ex-Yugoslavia unspecified, Turkey and Ukraine	Cambodia, China, Democratic People's Republic of Korea, Far East Asia (regional), Indonesia, Lao People's Democratic Republic, Malaysia, Mongolia, Philippines, Thailand, Timor-Leste and Viet Nam	Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Middle East (regional), State of Palestine, Syrian Arab Republic and Yemen	Antigua and Barbuda, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, North and Central America (regional), Panama, Saint Lucia, Saint Vincent and the Grenadines, and West Indies (regional)	Algeria, Egypt, Libya, Morocco, North of Sahara (regional) and Tunisia	Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Oceania (regional), Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna	Afghanistan, Armenia, Azerbaijan, Bangladesh, Bhutan, Central Asia (regional), Georgia, India, Kazakhstan, Kyrgyzstan, Maldives, Myanmar, Nepal, Pakistan, South and Central Asia (regional), South Asia (regional), Sri Lanka, Tajikistan, Turkmenistan and Uzbekistan	Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, South America (regional), Suriname, Uruguay and Venezuela (Bolivarian Republic of)	Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South of Sahara (regional), South Sudan, Sudan, Togo, Uganda, United Republic of Tanzania, Zambia and Zimbabwe

Source: http://www.oecd.org/dac/stats/dacandcrscodelists.htm

Note: There is also a "Regional and Unspecified" group, which includes "Africa (regional)", "America (regional)", "Asia (regional)" and "Developing countries (unspecified)".

a. This designation is without prejudice to positions on status, and is in line with United Nations Security Council resolution 1244 and the International Court of Justice Opinion on the Kosovo Declaration of Independence.

Annex B: Compilation of operational definitions in use

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
OECD DAC **Source:** **(OECD, 2016b) OECD DAC Rio Markers for Climate: Handbook**	Rio markers were designed to track the mainstreaming of environmental considerations into development cooperation rather than providing a quantification of finance and provide separate markers for climate change mitigation and climate change adaptation. 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 that 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 Eligibility 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 Eligibility (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 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

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
MDBs (AfDB, ADB, EBRD, et al., 2020)	MDB climate finance refers to the financial resources (from own accounts and MDB-managed external resources) committed by MDBs to development operations and components thereof which enable activities that mitigate climate change and support adaptation to climate change.	MDBs classify an activity as related to climate change mitigation if – it promotes "efforts to reduce, or limit, or sequester GHG emissions to reduce climate change" – it is based on the MDB joint typology following the Common Principles for Climate Change Mitigation Finance Tracking jointly agreed by the MDBs and the IDFC Eligibility Based on a positive list of activities that are compatible with low-emission pathways, and recognizes the importance of long-term structural changes such as the shift in energy production to renewable energy technologies, and the modal shift to low-carbon modes of transport. Consequently, greenfield and brownfield renewable energy and transport modal shift projects are included; investments in greenfield energy and resource efficiency are included only in a few cases where they help prevent a long-term lock-in to high-carbon infrastructure; brownfield energy and resource efficiency investments must foresee the replacement of old technologies well before the end of their lifetime with new technologies that are substantially more efficient. The methodology assumes that care will be taken to identify projects that are included in the typology list but do not mitigate emissions due to their specific circumstances. Examples of such projects include: hydropower plants with high methane emissions from reservoirs exceeding the GHG reductions associated with the plant's use of renewable energy; geothermal power plants with high CO_2 content in the geothermal fluid that cannot be reinjected; or biofuel projects with net high emissions taking into account production, processing and transportation. A list of eligible activities is provided in annex C, table A.C.1 of the Joint MDB Climate Finance 2019 report	– Financial resources associated with only those components or elements/ proportions of projects that directly contribute to or promote adaptation, with the aim of lowering the current and expected risks or vulnerabilities posed by climate change. 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 – Has been based on MDB joint methodology for tracking adaptation finance that follows a context- and location-specific, conservative and granular approach. A list of case studies of tracking adaptation finance is provided in Annex B, table A.B.1 of the Joint MDB Climate Finance 2019 report Eligibility The MDB methodology on adaptation finance tracking consists of the following three key steps: 1. setting out the climate change vulnerability context of the project 2. making an explicit statement of intent of the project to reduce climate change vulnerability, and 3. articulating a clear and direct link between specific project activities and the project's objective to reduce vulnerability to climate change. The identification and estimation of adaptation finance is limited solely to those project activities (that is, projects, project components, or elements or proportions of projects) that are clearly linked to the climate change vulnerability context.

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
IDFC **(IDFC, 2019)**	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 definition provided in appendix B of the Green Finance Mapping IDFC Report, which takes the MDBs–IDFC Common Principles for Climate Change Mitigation Finance Tracking into account. 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" Eligibility Eligibility criteria are based on a positive list of project categories and activities, which are aligned with the MDBs–IDFC Common Principles. The list is given in appendix C, table C1, of the Green Finance Mapping IDFC Report 2019. Similar considerations to renewable energy, modal shift in transport, and energy efficiency investments are provided as in the MDB criteria.	Uses the definition provided in appendix B of the Green Finance Mapping IDFC Report, which takes the MDBs–IDFC Common Principles for Climate Change Adaptation Finance Tracking into account. An activity will be classified as related to climate change adaptation if it addresses current and expected effects of climate change, where such effects are material for the context of those activities Eligibility Based on the MDBs–IDFC Common Principles for Climate Change Adaptation Finance Tracking, consists of the following key steps: • Setting out the context of risks, vulnerabilities and impacts related to climate variability and climate change; • Stating the intent to address the identified risks, vulnerabilities and impacts in project documentation; • Demonstrating a direct link between the identified risks, vulnerabilities and impacts, and the financed activities Adaptation finance tracking requires adaptation activities to be disaggregated from non-adaptation activities as far as reasonably possible. If disaggregation is not possible using project specific data, a more qualitative or experience-based assessment can be used to identify the proportion of the project that covers climate change adaptation activities. Consistent with the principle of conservativeness, climate finance is underreported rather than overreported in this case.
CPI **(Buchner et al., 2019)**	Aligned with the recommended operational definition of the 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. Eligibility Positive list, drawing on OECD DAC, MDB and IDFC approaches 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 • Private finance to large hydro projects if such projects cannot be verified to achieve net GHG emission reductions	Adaptation finance is defined as resources directed at 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 Eligibility Positive list, drawing on OECD DAC, MDB and IDFC approaches

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
IPCC (IPCC, 2014a)	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 contribution of Working Group III 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	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
CBI (CBI 2020); (CBI 2019)	Not applicable. The CBI taxonomy refers to alignment with Paris Agreement goals on mitigation activities and climate resilience principles are proposed for adaptation activities	Not specified. Climate Bonds Taxonomy identifies the assets and projects needed to deliver a low-carbon economy and gives GHG emissions screening criteria consistent with the 2 degree global warming target set by the COP 21 Paris Agreement. Eligibility Positive list with screening indicators for specific assets. Excludes: - coal or oil power without CCS; coal- or oil-powered combined heat and power (CHP); waste heat recovery from coal or oil power; coal mining or oil extraction, refining, processing or production and associated supply chain infrastructure; products dedicated to clean-up or efficiency of fossil fuel energy - roads, road bridges, road upgrades, parking facilities, fossil fuel filling stations - oil tankers or other ships solely transporting coal or oil - agricultural or timber production on peatland - waste collection to landfill; landfill without gas capture	A climate resilience approach is used to guide adaptation activities based on the IPCC definitions for both adaptation and resilience. Climate resilience investments improve the ability of assets and systems to persist, adapt and/or transform in a timely, efficient, and fair manner that reduces risk, avoids maladaptation, unlocks development and creates benefits, including for the public good, against the increasing prevalence and severity of climate-related stresses and shocks. Eligibility The Climate Resilience Principles are divided into three parts: Part 1: Framing principle: This addresses the key preliminary aspects that need to be considered as they inform the risk and benefit assessments undertaken in Part 2, namely determining the asset's or project's boundary and interdependencies with the systems of which it is a part. Part II: Design principles: These address the climate risk assessment that needs to be undertaken in order to design, implement and operate assets and activities that appropriately address those risks. This includes understanding physical climate hazard, exposure and vulnerability, and potential trade-offs between climate resilience and climate mitigation impacts. For assets and activities focused on enhancing the resilience of the system, this also includes a resilience benefits assessment. Part III: Ongoing management principle: This addresses the need for ongoing monitoring and evaluation by the issuer to enable assets and activities to remain in step with evolving climate hazards, exposures and vulnerabilities, and changing opportunities and needs for resilience benefits. As a bundle, the three-part Climate Resilience Principles form the framework for Climate Resilience Criteria to be applied to all assets and activities included in a bond seeking certification under the Climate Bonds Standard.

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
EU Sustainable finance taxonomy TEG 2020, technical annex	Not applicable. The EU taxonomy identifies economic activities that make a substantial contribution to climate change mitigation with performance thresholds and climate change adaptation with screening criteria. For all activities, a cross-cutting criteria of do no significant harm to other environment objectives applies.	An economic activity shall be considered to contribute substantially to climate change mitigation where that activity substantially contributes to the stabilization of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system by avoiding or reducing greenhouse gas emissions or enhancing greenhouse gas removals through any of the following means, including through process or product innovation, consistent with the long-term temperature goal of the Paris Agreement: (a) generating, transmitting, storing, distributing or using renewable energy in line with Directive (EU) 2018/2001, including through using innovative technology with a potential for significant future savings or through necessary reinforcement or extension of the grid; (b) improving energy efficiency except for power generation activities that are referred to in Article 14(2a); (c) increasing clean or climate-neutral mobility; (d) switching to the use of sustainably sourced renewable materials; (e) increasing the use of environmentally safe carbon capture and utilization (CCU) and carbon capture and storage (CCS) technologies that deliver a net reduction in greenhouse gas emissions; (fa) strengthening land carbon sinks, including through avoided deforestation and forest degradation, restoration of forests, sustainable management and restoration of cropland, grassland and wetlands, afforestation, and regenerative agriculture; (g) establishing energy infrastructure required for enabling the decarbonization of energy systems; (h) producing clean and efficient fuels from renewable or carbon-neutral sources; (i) enabling any of the above in accordance with Article 11a. 1a. For the purposes of paragraph 1, an economic activity for which there is no technologically and economically feasible low-carbon alternative shall be considered to contribute substantially to climate change mitigation as it supports the transition to a climate-neutral economy consistent with a pathway to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels including by phasing out greenhouse gas emissions, in particular from solid fossil fuels, where that activity: I. has greenhouse gas emission levels that correspond to the best performance in the sector or industry; II. does not hamper the development and deployment of low-carbon alternatives; and III. does not lead to a lock-in in carbon-intensive assets considering the economic lifetime of those assets. Eligibility Sector-specific criteria apply. In establishing thresholds for Taxonomy screening criteria, climate change mitigation objectives to mean net-zero emissions by 2050 and a 50–55% reduction by 2030 against 1990 levels, consistent with the commitments under the EU Green Deal	An economic activity shall be considered to contribute substantially to climate change adaptation where: a. that economic activity includes adaptation solutions that either substantially reduce the risk of adverse impact or substantially reduces the adverse impact of the current and expected future climate on that economic activity itself without increasing the risk of an adverse impact on other people, nature and assets; or where b. that economic activity provides adaptation solutions that, in addition to the conditions laid down in Article 11a, contribute substantially to preventing or reducing the risk of adverse impact or substantially reduce the adverse impact of the current and expected future climate on other people, nature or assets, without increasing the risk of an adverse impact on other people, nature and assets. 1.a The adaptation solutions referred to in point (a) of paragraph 1 shall be assessed and prioritized using the best available climate projections and shall, as a minimum, prevent or reduce: (a) The location-specific and context-specific adverse impact of climate change on the economic activity; or (b) The adverse impact that climate change may have on the environment within which the economic activity takes place Eligibility The following two-step process aims to demonstrate that an activity contributes to a substantial reduction of the negative effects of climate change: a. Assessing the expected negative physical effects of climate change on the underlying economic activity that is the focus of resilience-building efforts, drawing on robust evidence and leveraging appropriate climate information; b. Demonstrating how the economic activity will address the identified negative physical effects of climate change or will prevent an increase or shifting of these negative physical effects. The assessment of the contribution of the activity will vary based on its scope (asset, corporate, sector or market), as well as spatial and temporal scale. Moreover, the proposed approach recognizes that an adaptation activity may target an entity (e.g. a corporation or a city) and/or a market, sector, or region

Annex C: Comparison of methods and reporting approaches used by climate finance reporting organizations

Topic	UNFCCC	OECD DAC	MDBs	IDFC
Who submits data	National government	National government (29 DAC members, 3 non-DAC members), 7 MDBs and 10 climate funds	Data collection and reporting is done by a central unit in each MDB	Individual development banks
Who prepares integrated report or compilation of information	UNFCCC[147]	OECD DAC (activity-level data are compiled and processed by OECD DAC and published online); in addition, OECD DAC publishes statistical analyses	The annual joint report on MDB climate finance is coordinated by one of the MDBs. The coordinator role rotates among MDBs every three years	IDFC secretariat and steering group
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	Staff from central location in each MDB[148]	Development bank staff
Reporting approach		Objective or purpose of the activity (drawing on Rio markers definitions and eligibility criteria)	– *Mitigation finance*: based on a list of sectoral categories, subcategories, and activities eligible for classification as climate mitigation finance, which are based on the MDBs–IDFC Common Principles for Climate Change Mitigation Finance Tracking – *Adaptation finance*: based on the MDBs–IDFC Common Principles for Climate Change Adaptation Finance Tracking. Ongoing harmonization with OECD DAC Rio markers The adaptation finance tracking methodology uses a conservative and granular approach to reflect the specific focus of adaptation activities, and reduces the scope for overreporting of adaptation finance	– *Mitigation finance*: activity list based on Common Principles for Climate Change Mitigation Finance Tracking – *Adaptation finance*: based on Common Principles for Climate Change Adaptation Finance Tracking. Ongoing harmonization with OECD DAC Rio markers

147) For an example of UNFCCC compilation, please see <http://unfccc.int/national_reports/annex_i_natcom/compilation_and_synthesis_reports/items/2736.php>

148) In the case of MDBs, project staff classify the project and later it is checked centrally

Topic	UNFCCC	OECD DAC	MDBs	IDFC
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 (e.g. general budget support, debt relief)	– 10 mitigation sectoral categories broken down into 31 subcategories with 47 eligible activities in total – The joint MDB methodology for tracking climate change adaptation finance identifies 11 adaptation sectoral groupings/topics broken down into subsectors/topics, possible vulnerabilities to climate change and potential adaptation activities to address climate change	10 mitigation categories and 6 adaptation categories[149]
Instruments	Grants, concessional loans, non-concessional loans, equity and other	Bilateral ODA loans, grants and OOF; work under way to include, from 2017, credit lines, investment in companies and project finance	All	All
Status/point of estimation	Committed or disbursed (starting from BR3s)	Commitments (disbursements also tracked; but data not comprehensive)	Commitments	Commitments
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	Project component or subcomponent, or element or proportion[150]	Project component or subcomponent, or element or proportion[151]
Types or sources of funds	ODA, OOF and other	ODA and OOF, [152] private finance mobilized by three instruments from 2017	Internal and external; external resources managed by MDBs are separated from MDB own resources	Internal and external

149) The categories were adopted from the 2011 IDFC Green Finance Mapping methodology and updated according to the MDBs-IDFC Common Principles for Climate Finance Tracking. As there are significant challenges to unambiguously attributing specific investments to only one of the main themes, it was decided to split each theme into separate subcategories with clear project activity examples. The category on green energy and mitigation was also disaggregated further into sub-subcategories, based on the developed MDBs-IDFC Common Principles for Climate Change Mitigation Finance Tracking. When IDFC members do not have, or refrain from providing, subcategory information, amounts were classified as "non-attributed" under categories.

150) The approach may not always capture activities that contribute to resilience but that cannot be tracked in quantitative terms, or that do not have associated costs.

151) As described in the appendices to the IDFC Green Finance report (IDFC, 2017a-GS).

152) Reporting on the climate focus of non-ODA flows is not mandatory and the coverage of these data is limited. Project-level information on OOF is also not always available, in part because of confidentiality reasons.

Topic	UNFCCC	OECD DAC	MDBs	IDFC
Type of support (e.g. asset finance, R&D, capacity-building)	Core/general, climate-specific (mitigation, adaptation, cross-cutting and other)	Type of support specified at the activity level	Investments and technical assistance (including capacity-building); policy-based instruments are included in total finance, but highlighted as a category	Reported in aggregated form
Mitigation and/or adaptation outcome tracking and reporting			No common approach. Individual MDBs seek to demonstrate climate change impacts through project-specific data	
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)
Reporting period	Every two years on calendar basis	Calendar year	Fiscal year	Fiscal year
Form of reporting guidance	Guidelines adopted by the COP, including CTF tables	Reporting governed by OECD DAC *Converged Statistical Reporting Directives for the CRS and the Annual DAC Questionnaire* (annex 18) The Rio Marker handbook also includes reporting guidance specific to Rio marking	There is a common reporting sheet that MDBs fill in with project information, including climate finance (started in 2014)	Guidance, template and survey tool
Quality control procedures	Countries are responsible for the data, which are 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	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
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, quality of descriptive information, etc. Specific quality reviews on Rio markers are also conducted periodically	No peer review procedure to date	No peer review procedure to date
Existing data system	All data available on the UNFCCC website	OECD DAC CRS. The CRS and climate-related development finance databases are available on the OECD DAC website	Data are in Excel files. No activity-level database available online	Excel standard template applied. No activity-level database available online

Annex D: Compilation of methods for estimating private finance mobilized by public interventions

Institution	OECD DAC	MDBs	IDFC
Methodology	Mobilization	Private mobilization	Private sector co-financing
Operational definition	In DAC statistics and surveys, mobilization means the stimulation by specific financial mechanisms/interventions of additional resource flows for development	Private mobilization (also referred to as private co-financing) is the investment made by a private entity, which is defined as a legal entity that is: (a) carrying out or established for business purposes and (b) financially and managerially autonomous from national or local government. Some public entities that are organized with financial and managerial autonomy are counted as private entities	No operational definitions, but report on private sector co-financing, which entails: The asset financed is in private ownership (>= 50%) (i.e. private investment); and/or the financial contribution comes from a private sector actor (i.e. private capital)
Direct/ indirect mobilization	No differentiation between direct and indirect mobilization. Reporting on all private finance mobilized by official development finance interventions that can be measured and reported at the activity level	Private direct mobilization is financing from a private entity on commercial terms due to the active and direct involvement of an MDB leading to commitment. Evidence of active and direct involvement includes mandate letters, fees linked to financial commitment or other valid or auditable evidence of an MDB's active and direct role leading to commitments by private financiers. Private direct mobilization does not include sponsor financing Private indirect mobilization is financing from private entities supplied in connection with a specific activity for which an MDB is providing financing, where no MDB is playing an active or direct role that leads to the commitment of the private entity's finance. Private indirect mobilization includes sponsor financing, if the sponsor qualifies as a private entity	No differentiation between direct and indirect mobilization
Limitation to climate-related finance projects	No, covers both climate and non-climate related projects	No, covers both climate and non-climate related projects	Yes, covers only climate-related projects
Financial instruments	Instrument-specific methodologies developed for: Guarantees Syndicated loans Shares in collective investment vehicles Direct investment in companies Credit lines Simple co-financing arrangements (including standard grants and loans) Project finance schemes (e.g. SPVs) Work is ongoing to include technical assistance and capacity-building	Covers all instruments: Guarantees and unfunded risk transfers Long-term loans, equity and Islamic finance (tenor >1 year) Client bond issuance Direct transaction support Short-term finance (tenor <12 months e.g. trade finance, supply chain finance)	Loans, equity, guarantees, grants, revolving use of credit lines or green funds, public–private partnerships
Provider coverage	DAC members report on mobilized amount through bilateral channels. Multilateral institutions (including MDBs) report on amounts mobilized through their own interventions	Individual MDBs	IDFC members

Institution	OECD DAC	MDBs	IDFC
Public and private sources	Co-financing from private sources only. Covers all private finance mobilized by official development finance interventions regardless of the origin of the private funds (provider country, recipient country, third country). The origin of the private funds is distinguished when this information is available	Co-financing from private sources only	Co-financing from private sources only. Loans by private sector actors mobilized by IDFC members' loans, equity positions, guarantees, grants, public–private partnerships, credit lines or green funds Equity from private sector mobilized by IDFC member loans, equity positions, public–private partnerships, grants
Attribution methodology	Attribution of private mobilization to all public institutions involved in a transaction, based on instrument-specific causality assumptions and attribution methods: The general causality assumption is that the private financiers would not have invested in a development activity in the absence of the official sector mechanism/intervention Causality is based on assumptions that vary depending on the financial instrument/mechanism being used and take into account the risk taken and role played by public providers, as well as the volume of finance committed by these public providers	Attribution of private mobilization to MDBs: For private direct mobilization: the mobilization is attributed at its full value, less any adjustments in the case of guarantees or unfunded risk transfers, to the MDB which demonstrates the active and direct role For private indirect mobilization: the mobilization is attributed on a pro rata basis, according to the reporting MDB's share of all commitments attributed to all MDBs in an activity When the co-financing cannot be accurately tracked, only the amounts that are known with certainty are reported	Attribution of private mobilization to IDFC members. No attribution methodology described in the IDFC report. The report, however, mentions that it is acceptable to derive representative mobilization factors (e.g. 1.5 for revolving credit lines to banks or 1.5 for equity in project finance) for homogenous fractions of the portfolio based on a representative subset of projects
Addressing double counting	The OECD DAC approach aims to develop a standard for measuring the mobilization effect of official development finance interventions, while avoiding double counting at the international level Amounts of private finance mobilized are attributed at the activity level to all public institutions involved in a transaction using a pro rata methodology	The MDB approach prorates the amounts associated with the MDB finance mobilized among the MDBs only; there is therefore no double counting of co-finance reported by different MDBs from the same source. However, there is no attribution to potential bilateral providers or local actors, which would lead to double counting if those amounts were added to the MDB amounts	When several public sector actors are involved, the mobilized investment is attributed on a pro rata basis to different public financiers independent of the specific instruments applied. For loans to the private sector generated by the revolving use of credit lines or green funds the original loan is subtracted to avoid double counting
Measurement base	Commitment	Commitment	Commitment
Reporting period	Calendar year	Calendar year	Fiscal year
Reporting framework	Reporting governed by the DAC Converged Statistical Reporting Directives and the "DAC Methodologies for measuring the amounts mobilised from the private sector by official development finance interventions"	Reporting governed by the joint methodology for tracking and reporting mitigation and adaptation finance	Reporting governed by the IDFC Green Finance Mapping methodology
Quality control procedures	Beyond individual checks by bilateral and multilateral reporters, quality control procedures are performed by the OECD DAC secretariat when data are collected	Only at the individual bank level	Only at the individual DFI level
References	(OECD, 2017a-GS) (OECD, 2020b 2017b-GS) http://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-Methodologies-on-Mobilisation.pdf	(MDBs, 2018b-GS)	(IDFC, 2017a-GS)

Annex E: Compilation of shares used in calculating MDB climate finance attributed to developed countries

Institution	2017	2018
Approach based on ownership shares held by developed countries in each MDB		
Asian Development Bank	64.4%	59.2%
Asian Infrastructure Investment Bank	30.6%	30.6%
African Development Bank	38.4%	37.4%
European Bank for Reconstruction and Development	87.4%	78.2%
European Investment Bank	94.0%	94.4%
Inter-American Development Bank Group	60.3%	49.7%
World Bank Group	80.3%	81.3%
Approach based on share of paid-in capital and callable capital (mobilization effect) of each MDB		
African Development Bank	The 2018 percentages apply to 2017 data	58.2%
African Development Fund		93.6%
Asian Development Bank		71.4%
Asian Development Bank Special Fund		95.2%
Asian Infrastructure Investment Bank		27.3%
Council of Europe Development Bank		98.4%
Development Bank of Latin America		5.1%
European Bank for Reconstruction and Development		88.8%
European Investment Bank		98.6%
International Bank for Reconstruction and Development		67.9%
International Development Association		92.8%
Inter-American Development Bank		73.6%
Inter-American Development Bank Special Fund		72.5%
IDB Invest		33.6%
International Finance Corporation		64.1%
Multilateral Investment Guarantee Agency		64.2%
Private Infrastructure Development Group		100%

Annex F: Information on climate finance received reported in BURs

					Information provided in tabular format														
Country	Latest BUR	Year of sub-mission	Format	Level of information	Quant- or qual-itative	Title	Programme/project description	Channel	Recipient entity	Implem-enting entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Sector and subsector	Type of support	Linkage to capacity-building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results
Afghanistan	BUR1	2019	Tabular/ Textual	Project level	Quant.	■				■	■	■						■	
Andorra	BUR3	2019	Tabular	Project level	Quant.			■			■								
Antigua and Barbuda	BUR1	2020	Tabular	Project level	Quant.	■	■			■	■	■	■					■	
Argentina	BUR3	2019	Tabular	Project level	Quant.	■					■	■	■		■	■			
Armenia	BUR2	2018	Tabular	Project level	Quant.	■	■			■	■		■				■		
Azerbaijan	BUR2	2018	No information																
Benin	BUR1	2019	Tabular	Project level	Quant.	■	■					■					■		■
Bosnia and Herzegovina	BUR2	2017	No information																
Botswana	BUR1	2019	Tabular	Project level	Quant.	■	■		■		■	■	■					■	
Brazil	BUR3	2019	Tabular	Project level	Quant.	■		■			■	■	■		■	■	■		
Cambodia	BUR1	2020	Tabular	Project level	Quant.	■					■		■						
Chile	BUR3	2018	Tabular	Project level	Quant.	■	■	■			■	■			■	■			
China	BUR2	2019	Tabular	Project level	Quant.	■	■				■	■							
Colombia	BUR2	2018	Tabular	Project level	Quant.	■					■	■			■	■	■		
Costa Rica	BUR2	2019	Tabular	Institution and theme level	Quant.			■			■					■			
Côte d'Ivoire	BUR1	2018	Tabular	Project level	Quant.	■			■	■	■		■			■			
Cuba	BUR1	2020	Tabular	Project level	Quant.	■					■		■					■	

Country	Latest BUR	Year of sub-mission	Format	Level of information	Quant- or qual-itative	Information provided in tabular format												
						Title	Programme/project description	Channel	Recipient entity	Implem-enting entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Sector and subsector	Type of support	Linkage to capacity-building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results
Dominican Republic	BUR1	2020	Tabular	Project level	Quant.														
Ecuador	BUR1	2016	Tabular/ Textual	Aggregate by channel	Quant.														
Egypt	BUR1	2019	Tabular	Project level	Quant.														
El Salvador	BUR1	2018	No information																
Georgia	BUR2	2019	Tabular	Project level	Quant.														
Ghana	BUR2	2019	Tabular/ Textual	Project level	Quant.														
Guinea-Bissau	BUR1	2020	Tabular	Project level	Quant.														
Honduras	BUR1	2020	Tabular	Project level	Quant.														
India	BUR2	2018	Text only	Project/ programme level															
Indonesia	BUR2	2018	Tabular/ Textual	Instrument andinstitution aggregate	Quant.														
Israel	BUR1	2016	Text only	Project level															
Jamaica	BUR1	2016	Text only	Institution level															
Jordan	BUR1	2017	Tabular	Project level	Quant.														
Kuwait	BUR1	2019	No information																
Lao People's Democratic Republic	BUR1	2020	Tabular	Project level	Qual.														

Country	Latest BUR	Year of sub-mission	Format	Level of information	Quant- or qual-itative	Information provided in tabular format												
						Title	Programme/project description	Channel	Recipient entity	Implem-enting entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Sector and subsector	Type of support	Linkage to capacity-building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results
Lebanon	BUR3	2019	Tabular/ Textual	Project level	Quant.													
Malaysia	BUR3	2020	Tabular/ Textual	Project level	Quant.													
Maldives	BUR1	2019	Tabular	Project level	Quant.													
Mauritania	BUR1	2016	Tabular	Project level	Quant.													
Mexico	BUR2	2019	Text only	Institution level														
Mongolia	BUR1	2017	Tabular/ Textual	Project level	Quant.													
Montenegro	BUR2	2019	Text only	Institution level														
Morocco	BUR2	2019	Tabular	Project level	Quant.													
Namibia	BUR3	2019	Tabular/ Textual	Project level	Qual.													
Nigeria	BUR1	2018	Tabular	Project level	Quant.													
North Macedonia	BUR2	2018	Tabular	Institution level	Quant.													
Oman	BUR1	2019	Text only	Institution level														
Panama	BUR1	2019	Tabular	Project level	Quant.													
Papua New Guinea	BUR1	2019	Tabular	Project level	Quant.													
Paraguay	BUR2	2018	Tabular	Project level	Quant.													

Country	Latest BUR	Year of sub-mission	Format	Level of information	Information provided in tabular format															
					Quant- or qual-itative	Title	Programme/project description	Channel	Recipient entity	Implem-enting entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Sector and subsector	Type of support	Linkage to capacity-building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results
Peru	BUR2	2019	Tabular	Project level	Quant.														
Republic of Korea	BUR3	2019	No information	No information															
Republic of Moldova	BUR2	2019	Text only	Institution level															
Saudi Arabia	BUR1	2018	No information	No information															
Serbia	BUR1	2016	No information	No information															
Singapore	BUR3	2018	No information	No information															
South Africa	BUR3	2019	Tabular	Project level	Quant.														
Tajikistan	BUR1	2019	Tabular	Project level	Quant.														
Thailand	BUR3	2020	Tabular	Project level	Quant.														
Togo	BUR1	2017	Tabular	Institution level	Quant.														
Tunisia	BUR2	2016	Tabular	Project level	Quant.														
Uganda	BUR1	2019	Tabular	Project level	Quant.														
Uruguay	BUR3	2019	Tabular	Project level	Quant.														
Viet Nam	BUR2	2017	Tabular	Project level	Quant.														
Yemen	BUR1	2018	Tabular	Project level	Quant.														
Zambia	BUR1	2020	Tabular	Project level	Quant.														

Quantitative information on finance received for projects starting in 2017 or 2018 (millions of USD)

Party	2017	2018	Grand total
Afghanistan	5.95	0.30	6.25
Antigua and Barbuda	22.35	45.09	67.43
Argentina	3827.69		3827.69
Armenia	0.71		0.71
Brazil	2427.18		2427.18
Cambodia	123.19		123.19
Chile	40.73	0.85	41.58
Colombia	315.13		315.13
Côte d'Ivoire	1.34	106.23	107.57
Dominican Republic	7.66	10.92	18.58
Georgia	375.62	546.60	922.22
Guinea-Bissau	28.99	12.00	40.99
India	42.40	143.40	185.80
Jordan	16.95	150.00	166.95
Lebanon	0.00	638.17	638.17
Maldives	43.50		43.50
Namibia	0.35	0.00	0.35
Oman		0.30	0.30
Panama	1.23	14.33	15.56
Papua New Guinea	9.32	6.00	15.32
Paraguay	39.36	30.13	69.48
Peru	1.05		1.05
South Africa	1.73		1.73
Tajikistan	74.00	20.00	94.00
Thailand	5.03	41.68	46.71
Tunisia	110.00		110.00
Viet Nam	173.09	262.70	435.79
Zambia	95.55		95.55
Grand Total	**7790.08**	**2028.71**	**9818.79**

Annex G: Status of impact reporting under operating entities

Fund	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other impact metrics/comments
Adaptation Fund Date operational: 2009 Data as of: Jun-20 Source: Annual Performance Report for the Fiscal Year 2020	Adaptation	Number of projects/programmes expected	n/a	107 (in addition, 64 project formulation grants have been approved)	• Number of early warning systems • Policies introduced or adjusted to address climate • Assets produced, developed, improved or strengthened • Increased income or avoided decrease in income • Natural assets (habitat, coastline) created, protected or rehabilitated (HA)
		Expected beneficiaries with vulnerability reduced (in millions)	26 (8.7 direct and 17.3 indirect) based on 105 approved project proposals	2.2 based on 18 completed projects	
		Expected number of countries (or regional programmes)	n/a	92	
Green Climate Fund Date operational: 2015 Data as of: Aug-20 Source: • GCF/B.27/Inf.04: Annual portfolio performance report (2019) • GCF website • GCF/B.27/17: 9th Report of the GCF to the COP	Adaptation	Number of projects/programmes expected	n/a	95 (adaptation projects, including 36 cross-cutting projects)	• Co-financing pledged for activities under implementation • Co-financing mobilized • Portfolio under implementation under thematic area
		Expected beneficiaries with vulnerability reduced (in millions)	111 direct beneficiaries 238 indirect beneficiaries	10 (direct and indirect)	
		Expected number of countries (or regional programmes)	n/a	78 countries (adaptation and cross-cutting projects)	
	Mitigation	Number of projects/programmes expected	n/a	84 (mitigation projects, including 36 cross-cutting projects)	
		Number of beneficiaries (in million)	n/a	n/a	
		Energy/electricity saving	n/a	n/a	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	1000 (mitigation potential of 143 projects)	48 (reported as at end 2019)	

Fund	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other impact metrics/comments
GEF-General Trust Fund Date operational: 1991 Data as of: Jun-20 Source: • Annual Performance Report 2020 • GEF Report to the COP	Adaptation	Number of projects/programmes expected	n/a	1008	• Terrestrial protected areas created or under improved management for conservation and sustainable use • Marine protected areas created or under improved management for conservation and sustainable use • Reduction, avoidance of emissions of POPs to air from point and non-point sources • Area of land restored • Area of landscapes under improved practices • Area of marine habitat under improved practices to benefit biodiversity • Number of shared water ecosystem under new or improved cooperative management • Globally over-exploited marine fisheries moved to more sustainable levels • Since April 2016, the GEF prepares a Corporate Scorecard twice a year that provides an update on contributions to global environmental benefits, programming, and corporate efficiency and effectiveness • The results are based on the GEF-7 Corporate Scorecard, a comprehensive report on the performance of the GEF during the GEF-7 period
		Expected beneficiaries with vulnerability reduced (in millions)	119.78 (direct)	n/a	
		Expected number of countries (or regional programmes)	n/a	n/a	
	Mitigation	Number of projects/programmes expected	n/a	n/a	
		Number of beneficiaries (in millions)	n/a	n/a	
		Energy/electricity saving	n/a	n/a	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	1153	n/a	
GEF-LDCF Date operational: 2002 Data as of: Jun-20 Source: • SCCF/LDCF websites • Financing Adaptation to Climate Change (GEF) 2021 • LDCF/SCCF Annual Evaluation Report 2020	Adaptation	Number of projects/programmes expected	282	305	• Number of hectares of land under climate-resilient management • Number of policies, plans and development frameworks that mainstream climate resilience • Number of people with enhanced capacity to identify climate risk and/or engage in adaptation measures In the GEF-7 period, the LDCF/SCCF will follow the GEF policy for reporting on core indicators. All projects approved in GEF-7 will report on the LDCF/SCCF core indicators and no longer on the indicators from the GEF-6 results
		Expected beneficiaries with vulnerability reduced (in millions)	22.30 (direct)	15.65 (direct)	
		Expected number of countries (or regional programmes)	51	47	
GEF-SCCF Date operational: 2002 Data as of: Jun-20 Source: • SCCF/LDCF websites • Financing Adaptation to Climate Change (GEF) 2021 • LDCF/SCCF Annual Evaluation Report 2020	Adaptation	Number of projects/programmes expected	80	87	
		Expected beneficiaries with vulnerability reduced (in millions)	6.97 (direct)	5.74 (direct)	
		Expected number of countries (or regional programmes)	78	76	

Fund	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other impact metrics/comments
CIF-CTF Date operational: 2008 Data as of: Jan-20 Source: • CTF Results Report - Jan 2020 • CIF CTF website	Mitigation	Number of projects/programmes expected	89	89	• Volume of direct finance leveraged through CTF funding • Annual energy savings • Large infrastructure projects funded by CTF typically have a long gestation period, and only when they reach fully operational capacity, they start reporting results closer to targets. A project's age impacts the magnitude of its achieved results, with older projects more advanced in achieving targets than more recent projects
		Number of beneficiaries (in millions)	2.1 (passengers per day using low-carbon public transit)	0.291 (passengers per day using low-carbon public transit)	
		Energy/electricity saving	24 707 MW (renewable energy capacity) 11 147 GWh (annual energy savings)	5.7 GW (installed renewable energy capacity) 4.583 GWh (annual energy savings)	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	70.4 (per year)	63.7 (cumulative)	
CIF- SREP Date operational: 2010 Data as of Dec-19 Source: • SREP Operational and Results Report - Nov 2020 • CIF SREP website	Mitigation	Number of projects/programmes expected	46	46	• Increased public and private investments in targeted subsectors • Installed capacity from renewable energy Revised SREP results framework was approved in June 2018 to include co-financing leveraged by SREP projects and installed capacity as SREP core indicators
		Number of beneficiaries (in millions)	10 (people with improved energy access) 0.143 (businesses with improved energy access)	0.3475 (people with improved energy access) 0.000928 (businesses with improved energy access)	
		Energy/electricity saving	3 855 261 MWh/yr (annual electricity output from renewable energy) 269 MW (installed capacity)	116 089 MWh/yr (annual electricity output from renewable energy) 764 MW (installed capacity)	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	2.81 (per year)	0.044 (per year)	

Fund	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other impact metrics/comments
CIF-FIP Date operational: 2009 Data as of Dec-19 Source: • FIP Operational and Results Report - Nov 2020 • CIF FIP website	Mitigation	Number of projects/programmes expected	40	40	• Hectares covered under sustainable land management or other FIP interventions (Target: 18,474.197 ha, Results: 30,172,388 ha)
		Number of beneficiaries (in millions)	1.1 (direct beneficiaries with livelihood co-benefits)	0.96 (direct beneficiaries with livelihood co-benefits)	
		Energy/electricity saving	n/a	n/a	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	40.6	18.7	
CIF-PPCR Date operational: 2008 Data as of Dec-19 Source: • PPCR Operational and Results Report - Nov 2020 • CIF PPCR website	Adaptation	Number of projects/programmes expected	65	65	• Degree of integration of climate change into national and sectoral planning; • Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience; • Number of people supported by the PPCR to cope with the effects of climate change; • Quality and extent to which climate-responsive instruments/ investment models are developed and tested • Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR-supported tools, instruments, strategies and activities to respond to climate variability or climate change • Countries report on PPCR results based on 5 core indicators • The results of the PPCR portfolio should be interpreted in the context of the portfolio maturity
		Expected beneficiaries with vulnerability reduced (in millions)	45.247 (direct and indirect)	14.59 (direct)	
		Expected number of countries (or regional programmes)	17 countries 2 regional programmes	17 countries 2 regional programmes	

Fund	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other impact metrics/comments
WB-FCPF Date operational: 2008 Data as of: Jun-20 Source: • Forest Carbon Partnership Facility 2020 Annual Report	Mitigation	Number of projects/programmes expected	65 (18 Carbon Fund and 47 Readiness Fund)	69 (Carbon Fund only: 27 Latin America and Caribbean, 28 Africa, 14 Asia and Pacific)	• Total forest area re/afforested or restored through CF- supported interventions • Amount of protected or conserved areas included in CF programmes • Number of supported countries that have a national REDD+ strategy • Number of Readiness Packages endorsed by PC • Amount mobilized to support the REDD+ Readiness process • The FCPF supports REDD+ efforts through its Readiness Fund (47 countries) and Carbon Fund (18 countries) • The FCPF Results Framework constitutes more than 50 results indicators categorized by 4 outcomes and related outputs
		Number of beneficiaries (in millions)	n/a	50 (potential beneficiaries in ER programme areas of Carbon Fund)	
		Energy/electricity saving	n/a	n/a	
		GHG reduction (CO_2 equivalent, millions of metric tonnes)	n/a (no targets)	565.4	

Annex H: Climate finance reported in BR CTFs

Table H.1

Amounts of climate-specific finance and core general funding provided to developing countries in 2017 as reported in their BRs (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	23.74	83.9	12.57	.	.	.	96.	.	216.2	330.5	546.7
Austria	73.9	11.77	34.13	.	1.33	.	59.72	.	180.84	.	180.84
Belgium	19.11	40.51	31.85	.	1.8	24.92	.11	.	118.29	172.69	290.98
Canada	20.85	59.48	136.42	.	.	25.19	35.69	.	277.63	138.56	416.2
Denmark	55.29	34.11	56.47	.	7.47	19.58	31.85	.	204.78	219.38	424.15
EU (28)	798.35	1,395.82	988.14	.	2,829.07	147.66	.	.	6,159.04	.	6,159.04
Finland	8.76	6.91	21.93	.	2.68	1.03	93.26	.	134.57	698.07	832.64
France	3,489.85	773.86	.	.	399.85	263.16	5.45	.	4,932.16	612.64	5,544.8
Germany	4,599.5	1,248.1	1,170.66	.	76.02	129.92	126.22	.	7,350.42	1,048.75	8,399.17
Greece	.	.	.09	.	.	.	5.08	.	5.17	.	5.17
Iceland	3.44	7.53	3.25	.	.	.12	2.43	.	16.77	9.25	26.02
Ireland	.	29.1	32.59	.	.	1.96	10.7	.	74.35	19.37	93.72
Italy	30.68	64.65	271.69	.	14.38	18.97	311.94	.	712.31	490.02	1,202.33
Japan	8,378.22	756.85	419.21	.	25.17	.59	220.36	.	9,800.41	1,871.5	11,671.91
Luxembourg	9.63	11.91	9.88	.	.06	9.64	70.4	.	111.52	.98	112.5
Netherlands	44.67	177.8	90.5	.	4.07	5.44	142.67	.	465.15	.	465.15
New Zealand	7.57	13.93	6.36	.	.	.	.	.	27.86	50.35	78.21
Norway	378.8	54.22	35.97	.	.	.	.	.	469.	133.35	602.35
Portugal	1.39	1.06	.	.	.	.	.	.	2.44	60.74	63.19

	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			
Spain	394.82	35.77	42.54	.	5.31	.	136.92	.	615.38	.	615.38
Sweden	80.58	155.5	140.76	.	8.66	36.52	135.62	.	557.62	434.48	992.11
Switzerland	89.46	129.69	19.02	.	.	.	131.99	.	370.16	2,883.82	3,253.97
United Kingdom	483.13	479.94	-.17	.	.	.	198.58	.	1,161.48	2,295.29	3,456.77
United States	.	.	.	.	.	.	.	.	.	.	.
Total	**18,991.73**	**5,572.41**	**3,523.86**	**.**	**3,375.88**	**684.71**	**1,814.97**	**.**	**33,963.57**	**11,469.73**	**45,433.3**

Table H.2

Amounts of climate-specific finance and core/general funding provided to developing countries in 2017 as reported in their BRs (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											
Bulgaria											
Croatia	.	.	.	.	.	.	.	.	.	.02	.02
Cyprus	.	.	.	.	.	.	.	.	.	.	.
Czechia	1.54	3.78	.56	.	.	.	2.07	.	7.96	1.4	9.36
Estonia	.08	.43	.11	.	.07	.	.01	.	.7	.32	1.02
Hungary	.	.	10.72	.	.	.	5.87	.	16.59	9.08	25.68
Kazakhstan	.	.	.	.	.	.	.	.	.	.	.
Latvia	.	.	.03	.	.	.	.	.	.03	.	.03

	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			
Liechtenstein											
Lithuania	.	.	.	.	.	.	.79	.	.79	1.3	2.09
Malta	.	.01	.	.07	.	.	.1	.	.18	.	.18
Monaco	.06	2.12	.32	.05	.	.	.	.	2.55	.59	3.13
Poland	.33	1.67	.08	.	.	.	2.74	.	4.82	4.	8.83
Romania	.	.	.	.	.	.	.31	.01	.32	.01	.33
Russian Federation	.2	.	.8	5.25	.	.	.	.	6.25	4.72	10.97
Slovakia	1.73	.65	.14	.	1.39	.12	.	.	4.02	.42	4.44
Slovenia	.	.	.	.	.	.	.	.	.	.	.
Turkey											
Ukraine	.	.	.	.	.	.	.	.	.	.	.
Total	**3.94**	**8.66**	**12.76**	**5.36**	**1.46**	**.12**	**11.9**	**.01**	**44.2**	**21.86**	**66.07**

Note: Data accessed on 31 December 2020. 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 https://data.oecd.org/conversion/exchange-rates.htm for the respective reporting period were used for conversion to USD.

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 2,338.16 million.

Table H.3

Amounts of climate-specific finance and core general funding provided to developing countries in 2018 as reported in their BRs (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	18.28	92.46	6.68	.	.	.	145.69	.	263.12	455.61	718.74
Austria	169.79	32.57	14.04	.	1.83	.	64.14	.	282.37	.	282.37
Belgium	5.62	53.41	16.53	.	1.35	18.14	.18	.03	95.26	359.97	455.23
Canada	170.61	61.69	165.56	.	.	1.55	45.5	.	444.91	140.04	584.95
Denmark	76.38	36.62	59.04	.	16.54	29.54	15.33	.	233.45	258.7	492.15
EU (28)	657.44	1,182.8	1,291.39	.	3,233.29	276.08	.	.	6,641.	.	6,641.
Finland	10.57	2.83	16.99	.	4.03	2.48	18.09	.	54.98	633.42	688.4
France	2,838.56	1,177.71	1,276.37	.	396.48	316.54	2.36	.	6,008.02	1,594.84	7,602.86
Germany	4,132.22	1,375.87	1,525.52	.	89.17	162.28	203.97	.	7,489.03	908.2	8,397.23
Greece	.	.	.	.	.	.	4.45	.	4.45	.	4.45
Iceland	3.81	10.02	3.14	.	.	.13	2.43	.	19.53	9.1	28.63
Ireland	.99	8.33	61.9	.	.	2.13	17.82	.	91.16	3.3	94.46
Italy	55.02	91.55	146.79	.	.	8.26	231.98	.	533.61	572.29	1,105.89
Japan	9,211.03	1,348.98	262.15	.	24.41	.6	177.7	.	11,024.86	1,810.21	12,835.06
Luxembourg	11.46	21.67	12.76	.	.	18.66	64.66	.	129.22	1.02	130.24
Netherlands	76.75	203.74	134.69	.	3.73	7.97	227.33	.	654.21	.	654.21
New Zealand	10.85	17.8	14.37	.	1.04	.	.07	.	44.13	59.43	103.56
Norway	725.7	47.97	59.88	.	.	.	.	.	833.54	129.84	963.38
Portugal	.62	1.32	.	.	.	.	.	.	1.94	40.05	41.99
Spain	533.67	52.71	88.9	.	7.25	1.6	125.52	.	809.65	.	809.65

	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			
Sweden	116.41	241.5	141.93	.	2.83	26.31	155.66	.	684.64	505.08	1,189.72
Switzerland	168.3	135.52	36.59	.	.	.	112.1	.	452.5	2,796.23	3,248.74
United Kingdom	649.62	613.66	5.06	.	.	.	289.86	.	1,558.2	3,167.	4,725.2
United States	.	.	.	.	.	.	.	.	.	.	.
Total	**19,643.69**	**6,810.74**	**5,340.26**	**.**	**3,781.95**	**872.28**	**1,904.82**	**.03**	**38,353.77**	**13,444.32**	**51,798.09**

Table H.4

Amounts of climate-specific finance and core general funding provided to developing countries in 2018 as reported in their BRs (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											
Bulgaria											
Croatia	.	.	.	.	.	.	.	.	.	.03	.03
Cyprus	.	.	.	.	.	.	.	.	.	.47	.47
Czechia	1.66	4.79	.86	.	.	.	1.19	.	8.5	7.23	15.73
Estonia	.13	.04	.85	.	.1	.	.01	.	1.14	.45	1.59
Hungary	.12	3.29	.24	.	.	.	.	.	3.65	1.03	4.68
Kazakhstan	.	.	.	.	.	.	.	.	.	.	.
Latvia	.	.	.05	.	.	.	.	.	.05	.	.05
Liechtenstein											

	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			
Lithuania	.	.	.	.	.	.	.12	.	.12	1.46	1.58
Malta	.	.	.	.	.	.	.11	.	.11	.	.11
Monaco	.38	2.23	.35	.07	.	.	.	.	3.04	1.2	4.24
Poland	.48	54.05	.3	.	.	.	3.56	.	58.37	37.57	95.95
Romania	.	.	.	.	.	.	.	.04	.04	5.55	5.59
Russian Federation	.	.	.	1.	.	.	.	.	1.	2.58	3.58
Slovakia	.21	1.71	.	.	.49	.1	.	.	2.51	.43	2.94
Slovenia	.	.	.	.	.	.	.	.	.	.	.
Turkey											
Ukraine	.	.	.	.	.	.	.	.	.	.	.
Total	2.98	66.1	2.64	1.07	.59	.1	4.99	.04	78.52	58.	**136.52**

Note: Data accessed on 31 December 2020. 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 https://data.oecd.org/conversion/exchange-rates.htm for the respective reporting period were used for conversion to USD.

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 2,332.28 million.

Annex I: Characteristics of climate finance from MDBs

Table I.1

Climate finance from MDBs from their own resources and external sources by theme in 2017 (millions of USD)

Bank	2017								
	Adaptation			Mitigation			Total		
	Own Resources	External	Total	Own Resources	External	Total	Own Resources	External	Total
ADB	930	69	999	3,609	627	4,236	4,539	696	5,235
AfDB	607	176	783	1,336	228	1,564	1,943	404	2,347
EBRD	444	52	496	3,894	211	4,105	4,338	263	4,601
EIB	133	17	150	5,199	128	5,327	5,332	145	5,477
IDBG	787	53	840	3,283	225	3,508	4,070	278	4,348
WBG	3,945	139	4,084	8,828	300	9,128	12,773	439	13,212
Total	**6,846**	**506**	**7,352**	**26,149**	**1,719**	**27,868**	**32,995**	**2,225**	**35,220**

Table I.2

Climate finance from MDBs from their own resources and external sources by theme in 2018 (millions of USD)

Bank	2018								
	Adaptation			Mitigation			Total		
	Own Resources	External	Total	Own Resources	External	Total	Own Resources	External	Total
ADB	1,077	209	1,286	2,509	217	2,726	3,586	426	4,012
AfDB	1,280	321	1,601	1,463	207	1,670	2,743	528	3,271
EBRD	398	54	452	3,086	288	3,374	3,484	342	3,826
EIB	428	4	432	4,958	310	5,268	5,386	314	5,700
IDBG	1,243	31	1,274	3,233	459	3,692	4,476	490	4,966
WBG	7,736	154	7,890	12,819	616	13,435	20,555	770	21,325
Total	**12,162**	**773**	**12,935**	**28,068**	**2,097**	**30,165**	**40,230**	**2,870**	**43,100**

Annex J: Climate finance provided by members of IDFC

Table J.1

Climate finance from the International Development Finance Club by theme 2015-2018 (millions of USD)

Theme	2015	2016	2017	2018
Adaptation	5,913	4,861	9,676	15,372
Mitigation	128,213	153,251	184,271	106,264
Both Adaptation and Mitigation	1,254	1,470	1,625	3,325
Total	**135,380**	**159,582**	**195,572**	**124,961**

Table J.2

Geographic distribution of climate finance from the International Development Finance Club by theme 2017-2018 (millions of USD)

	2017				2018			
Region	Adaptation	Mitigation	Both Adaptation and Mitigation	Total	Adaptation	Mitigation	Both Adaptation and Mitigation	Total
Domestic								
OECD financing in home country		30,922		30,922	8	28,057	23	28,089
Non-OECD financing in home country	3,237	137,338	75	140,650	11,400	57,098	55	68,552
Total domestic	**3,237**	**168,260**	**75**	**171,572**	**11,408**	**85,155**	**78**	**96,641**
International								
OECD financing in other OECD countries	0	1,971	184	2,155	2	4,073	224	4,299
OECD financing in non-OECD countries	4,617	9,663	1,366	15,646	3,308	13,631	3,023	19,962
Non-OECD financing in OECD countries	4	333		337	0	0	0	0
Non-OECD financing in other non-OECD countries	1,817	4,076		5,893	656	3,404	0	4,060
Total international	**6,438**	**16,044**	**1,550**	**24,031**	**3,965**	**21,108**	**3,247**	**28,321**
Total international finance to non-OECD	*6,434*	*13,739*	*1,366*	*21,539*	*3,964*	*17,035*	*3,023*	*24,022*
Total domestic/ international finance	**9,675**	**184,303**	**1,625**	**195,603**	**15,373**	**106,263**	**3,325**	**124,962**

Annex K: Estimates of domestic public climate finance

Domestic public climate finance as reported in BURs, Climate Public Expenditure and Investment Reviews (CPEIRs) and other sources in 2017 and 2018 (millions of USD)

Country	Source of data			Comment	Annualized expenditure 2017–2018 (USD million)
	BUR	CPEIR	Other		
Antigua and Barbuda	x			Co-financing	3
Argentina			x	2017 only (IDB 2020)	2,349
Bangladesh		x		2017 and 2018 average	2,017
Cambodia		x		2017 and 2018 average	84
Colombia			x	2017 only (IDB 2020)	812
Côte d'Ivoire	x			Co-financing	6
France			x	I4CE 2019	16,880
European Commission			x	EC budget	34,669
Georgia	x			Co-financing	24
Honduras			x	Budget tagging	2,503
India			x	CPI 2020	3,420
Indonesia		x		2017 and 2018 average	7,005
Jamaica			x	2017 only (IDB 2020)	161
Kenya			x	CPI 2021	752
Maldives	x			Co-financing	1
Mexico			x	2017/2018 average (Mexico 2020)	3,934
Nepal			x	Budget tagging	3,611
Nicaragua			x	Budget tagging	14
North Macedonia	x			2017 budget allocation	78
Pakistan			x	Budget tagging	1,492
Peru			x	2017 only (IDB 2020)	1,424
Philippines		x		2017 only	4,060
South Africa			x	2017–2018 (CPI 2021)	914
Viet Nam		x		2017 only, 13 provinces in Mekong delta (UNDP 2019)	438
Total					86,651

Annex L: Characteristics of global climate finance

Sector	2015	2016	2017	2018	Data quality	Completeness of data	Sources of data
Renewable energy							
Public	61.7	52.3	66.5	51.4	High: mostly project-level data	High: all RE technologies covered	CPI 2020 based on multiple sources Chapter 2.2.1
Private	259.2	217.1	284.9	271.0			
Total	**320.9**	**269.5**	**351.4**	**322.5**			
Energy efficiency							
Public	25.7	32.9	35.7	32.3	Medium: aggregate data	Medium: few sectors	IEA Energy Efficiency Market Reports/ CPI
Private[a]	182.5	192.0	194.2	202.3			
Total	**208.2**	**224.9**	**229.9**	**234.6**			
Sustainable transport							
Public	73.9	93.7	118.1	70.9	Medium–High: sales and project-level data and modelled cost estimates for charging infrastructure	Medium: not all technologies or solutions	IEA World Energy Investment Report/ CPI 2020 based on multiple sources
Private	28.4	23.6	42.4	49.7			
Total	102.2	117.3	160.5	120.5			
Agriculture, forestry and land use							
Public	6.5	5.6	14.8	11.6	High: Project-level data	Low: private sector data lacking	CPI 2020 based on multiple sources
Other sectors[b]: Mitigation							
Public	19.1	19.5	22.6	22.8	High: project-level data	Low: private sector data lacking	CPI 2020 based on multiple sources
Adaptation							
Public	21.7	22.4	24.7	34.1	High: project-level data	Low: private sector data lacking	CPI 2020 based on multiple sources
Non-sector-aggregated data							
Domestic public finance	67.1	67.1	86.7	86.7	Low	Low	BURs, CPEIRs (UNDP), I4CE, CPI

Notes: a) Value discounts transport energy efficiency estimates by 8.5 per cent to account for overlap with EV estimates, same as in the previous years. b) Other public sector investments include transmission and distribution systems, waste and wastewater, policy and national budget support and capacity-building and other cross-sectoral investments.

Annex M: Examples of climate-related metrics for financial reporting

List of climate-related KPIs for financial reporting (adapted from EC regulations). Green shading indicates metric relevant to low GHG emissions; violet climate-resilient development, and blue both

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks
GHG emissions				
Direct GHG emissions (Scope 1)	Metric tonnes CO_2 eq	270,900 t CO_2 eq	This KPI ensures companies are accurately measuring their carbon footprints from direct emissions.	TCFD, CDP, GRI, CDSB, SASB, EMAS
Indirect GHG emissions (Scope 2)	Metric tonnes CO_2 eq	632,400 t CO_2 eq	This KPI ensure companies are measuring emissions from purchased or acquired electricity, steam, heat and cooling.	TCFD, CDP, GRI, CDSB, EMAS
All indirect GHG emissions (not included in Scope 2) (Scope 3)	Metric tonnes CO_2 eq	4,383,000 t CO_2 eq	For most companies, the majority of emissions occur indirectly from value chain activities. This KPI helps to gauge the thoroughness of companies' accounting processes and to understand how companies are analysing their emissions footprints.	TCFD, CDP, GRI, CDSB, EMAS
GHG absolute emissions target	Metric tonnes CO_2 eq achieved or % reduction, from base year	20 % reduction in absolute emissions, equivalent to a 1,500,000 t CO_2 eq reduction by 2025 from 2018 base year	Target setting provides direction and structure to environmental strategy. This KPI helps to understand companies' commitments to reducing emissions and whether the company has a goal towards which it is harmonizing and focusing emissions-related efforts.	TCFD, CDP, GRI, CDSB, SASB, EMAS
Energy				
Total energy consumption and/or production from renewable and non-renewable sources	MWh	292,221 MWh consumed from renewable sources; 1,623,453 MWh consumed from non-renewable sources	Energy consumption and production accounts for an important proportion of GHG emissions.	TCFD, CDP, GRI, CDSB, SASB, EMAS
Energy efficiency target	Percentage	6.5 % improvement by 2025 from 2018 base year for product, output or activity	This KPI helps data users understand the companies' ambition to use energy more efficiently, which can reduce its energy costs and lower GHG emissions. It provides further background as to how the company aims to achieve its emission reduction targets.	TCFD, CDP, GRI, CDSB, SASB, EMAS
Renewable energy consumption and/or production target	% increase of the proportion of renewable energy consumed/produced from base year	13 % increase of the proportion of renewable energy consumed by 2025 from 2018 base year	This KPI helps data users understand the companies' ambition to produce or consume energy with lower GHG emissions.	TCFD, CDP, GRI, EMAS

List of climate-related KPIs for financial reporting (adapted from EC regulations). Green shading indicates metric relevant to low GHG emissions; violet climate-resilient development, and blue both

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks
Assets committed in regions likely to become more exposed to acute or chronic physical climate risks	Percentage	15 % of book value of exposed real assets	Extreme weather events can result in interruptions to or limitations on production capacity or early curtailment of operating facilities. The value of assets in areas exposed to increased weather informs the potential implications for asset valuation. It is important to observe this KPI in conjunction with disclosures regarding the company's adaptation strategies and policies.	TCFD Metrics and Targets, all 450a.1 SASB codes within select industries
Products and services				
Percentage turnover in the reporting year from products or services associated with activities that contribute to mitigation or adaptation and/or Percentage investment (CapEx) and/or expenditures (OpEx) in the reporting year for assets or processes associated with activities that contribute to mitigation or adaptation	Percentage	12.5 % (turnover) from products or services associated with activities that substantially contribute to mitigation of or adaptation to climate change 8 % (CapEx) in products associated with activities that substantially contribute to mitigation of or adaptation to climate change	These KPIs provide useful information to investors who are interested in companies whose products and services substantially contribute to mitigation of or adaptation to climate change while not significantly harming any other of the EU's environmental objectives.	
Green finance				
Climate-related Green Bond Ratio: Total amount of green bonds outstanding (at year-end) divided by (a 5-year rolling average of) total amount of bonds outstanding and/or, Climate-related Green Debt Ratio: Total amount of all green debt instruments outstanding (at year-end) divided by (a 5-year rolling average of) total amount of all debt outstanding	Percentage	20 % of bonds	This KPI helps companies communicate how their low-carbon transition plan is supported by debt financing activities and how capital is raised for existing and new projects with climate benefits.	ISO/CD 14030-1 Green bonds -- Environmental performance of nominated projects and assets (DRAFT)
Banks and insurance companies – general KPIs				
Amount or percentage of carbon-related assets in each portfolio in MEUR or as a percentage of the current portfolio value (5)	M in reporting currency percentage	EUR 20 m or 20 % carbon-related assets of bank's equity portfolio	Show awareness of the exposure of portfolio to sectors affected to varying degrees by climate-related risks and opportunities.	TCFD Common Carbon Footprinting and Exposure Metrics
Weighted average carbon intensity of each portfolio, where data are available or can be reasonably estimated (6)	t CO_2 eq /M revenues in reporting currency	A bank reports the carbon intensity of its equity portfolio in terms of t CO_2 eq per EUR m using third-party carbon data	Show awareness of the exposure of portfolio to sectors affected to varying degrees by climate-related risks and opportunities.	TCFD Common Carbon Footprinting and Exposure Metrics

List of climate-related KPIs for financial reporting (adapted from EC regulations). Green shading indicates metric relevant to low GHG emissions; violet climate-resilient development, and blue both

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks
Volume of exposures by sector of counterparty	Reporting currency % of the total risk exposure	EUR 1,250 m in energy sector accounting for 17 % of total investments	Show the concentration of exposures towards high-carbon and low-carbon sectors.	
Lending and investment activities				
Credit risk exposures and volumes of collateral by geography/country of location of the activity or collateral, with an indication of those countries/ geographies highly exposed to physical risk	Reporting currency	EUR 750 m	Show the concentration of exposures and collateral in countries and geographies highly exposed to physical risks.	
Volume of collaterals related to assets or activities in climate change mitigating sectors	% of the total volume of collaterals	12 % of collaterals	Show the volume of green collaterals, e.g. with lower carbon exposure.	
Volume of financial assets funding sustainable economic activities contributing substantially to climate mitigation and/or adaptation	Reporting currency % of the total risk exposure	EUR 650 m accounting for 12 % of lending portfolio	Show the concentrations of green investments and their resilience to climate change.	
Total amount of the fixed income portfolios invested in green bonds (at year-end) divided by (a 5-year rolling average of) total amount of holdings in fixed income portfolios	Percentage and total amount in reporting currency	Green bonds compared to vanilla bonds underwritten or emitted	This indicator demonstrates commitment to green finance and the investor's strategy and transition path towards alignment with a well below 2 °C scenario.	The proposed draft version of ISO 14030 (October 2018) on green bonds already requires reporting on this indicator
Insurance underwriting activities				
Breakdown of underwriting exposure by lines of business to economic sectors (life/ non-life/reinsurance)	Reporting currency	Amount and % of net premiums written and of technical provisions deriving from infrastructure insurance from policyholders in the energy sector	Demonstrate awareness of current economic exposure and concentration (if any) in industries that are impacted by climate change in varying degrees.	EU taxonomy SASB Directive 2009/138/EC (Solvency II)
Percentage of products incorporating climate-related risks into the underwriting process for individual contracts (life/non-life/reinsurance).	0–100 %	Products could be related to a specific type of risk or to a segment of the clientele with particular exposure to climate risks	Demonstrate product portfolio resilience to climate change.	SASB

List of climate-related KPIs for financial reporting (adapted from EC regulations). Green shading indicates metric relevant to low GHG emissions; violet climate-resilient development, and blue both

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks
Number and value of climate-related underwriting products offered (non-life/ reinsurance).	Reporting currency Number	The company has developed a specific offering for geographic areas particularly exposed to extreme weather events, and discloses quantitative information around the uptake of the product	Demonstrate ability to capture opportunities deriving from climate change mitigation and adaptation.	N/A
Maximum expected loss from natural catastrophes caused by climate change (life/non-life/reinsurance).	Reporting currency	A company discloses its net maximum expected loss by peril and region. Based on occurrence exceedance probability (OEP) in billion EUR. Perils include hurricanes, floods, wildfires and droughts	Demonstrate risk management maturity and business resilience to adverse conditions.	SASB FN-IN-450a.1, AODP ASTM
Total losses attributable to insurance payouts from (1) expected natural catastrophes and (2) non-expected natural catastrophes, by type of event and geographic segment (net and gross of reinsurance)	Reporting currency	A company discloses the key results of its natural catastrophe risk management	Demonstrate risk management maturity and business resilience to adverse conditions.	SASB FN-IN-450a.2, GRI 201-2

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