Technical Report

UNFCCC Standing Committee on Finance

Sixth Biennial Assessment and Overview of Climate Finance Flows

United Nations
Framework Convention on
Climate Change

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https://unfccc.int/topics/climate-finance/resources/biennial-assessment-of-climate-finance

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

I. Introduction

A. Context and mandates

1. The sixth BA conducted by the SCF provides an updated overview of climate finance flows up until 2022, highlighting the trends therein, and an assessment of the implications of these flows for international efforts to address climate change. The sixth BA includes:

(a) Information on recent developments in methodologies related to tracking climate finance at the international and domestic level, the operational definitions of climate finance in use and the indicators for measuring the impacts of climate finance, as well as the emerging methodologies that support tracking consistency of finance flows;
(b) An overview of global climate finance flows and of climate finance flows from developed to developing countries,[1] as well as available information on domestic climate finance and on South–South cooperation on climate finance;
(c) An assessment of the key features of climate finance flows, including their thematic objectives, geographical distribution and additionality and the financial instruments employed; and an exploration of the effectiveness, ownership, accessibility and magnitude (in the context of broader flows) of climate finance flows;
(d) A mapping of information relevant to the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement of making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development, including its reference to Article 9 thereof.

2. Since the first BA in 2014, the preparation of BAs has been guided by mandates from the COP and the CMA to the SCF.[2] Following the fifth BA in 2022, the COP and the CMA provided further guidance to the SCF in the context of preparing the sixth BA[3], in particular on:.

(a) Further work with regard to the quality, transparency and granularity of information, including in relation to data by region, private finance mobilized through public interventions, and financing arrangements relevant to averting, minimizing and addressing loss and damage;
(b) Updating the operational definition of climate finance of the SCF;;
(c) Including information reported in biennial communications under Article 9, paragraph 5, of the Paris Agreement, as appropriate.

3. The sixth BA comprises this summary and recommendations prepared by the SCF, and a technical report prepared by experts under the guidance of the SCF.[4] The technical report was subject to extensive stakeholder input and expert review, but remains a product of the external experts.

B. Scope and approach

4. The sixth BA focuses on climate finance flows in 2021–2022 and identifies trends in relation to previous years where possible. It draws on quantitative data from a wide range of sources, including but not limited to Parties' BRs, BURs and preliminary data from BTRs, supplemented with other data from international organizations, international financial institutions, United Nations organizations, academia, non-governmental organizations, think-tanks and the private sector, in order to ensure comprehensiveness and provide detailed insights into climate finance flows. The technical report has also benefited from qualitative information from various sources, including responses to the relevant call

1) 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 flows from Parties included in Annex I and Annex II to the Convention to Parties not included in Annex I to the Convention and MDBs; flows from OECD members to non-members; flows from OECD Development Assistance Committee members to countries eligible for OECD Development Assistance Committee official development assistance; and other relevant classifications

2) Decisions 2/CP.17, para. 121(f); 1/CP.18, para. 71; 5/CP.18, para. 11; 3/CP.19, para. 11; 4/CP.24, paras. 4, 5 and 10; 11/CP.25, para. 9; and 5/CMA.2, para. 9.

3) Decisions 14/CP.27, para. 7; 5/CP.28, para. 6; and 9/CMA.5, para. 3.

4) The technical report will be made available on the SCF web pages (https://unfccc.int/SCF).

for evidence[5] and a wide range of reports that explore topics related to climate finance.

C. Challenges and limitations

5. In preparing the sixth BA, 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 operational definition of climate finance identified in the first BA and to avoid double counting by focusing on primary finance, which refers to finance for a new physical item or activity.[6] Nevertheless, the challenges and limitations outlined below should be taken into consideration when deriving conclusions and policy considerations from the sixth BA.

6. CMA 1 set the deadline for submission of the first BTRs under the ETF as 31 December 2024. The first BTRs will include information on climate finance provided and mobilized in 2021–2022, replacing the reporting under the Convention, which ended with the submission of BR5s by 31 December 2022 with data on climate finance provided in 2019–2020. As the sixth BA was prepared ahead of the deadline for Parties' reporting, the SCF invited Parties to provide preliminary data on climate finance provided and mobilized and received for 2021–2022 for preparing it, as it did for the fifth BA. The preliminary data are provisional and subject to change once Parties have submitted their BTR1s by the end of 2024. Furthermore, since the scope of reporting on climate finance provided and mobilized has been expanded for the BTRs, caution should be exercised in comparing the trends from before 2020 with those after 2020.

7. In the area of global climate finance, challenges remain in filling gaps in data, particularly on private finance for adaptation activities and for mitigation activities in the AFOLU, waste, and water and sanitation sectors. In addition, methodologies for calculating climate finance based on total cost or incremental cost differ and therefore produce different estimates by activity. This places limits on the completeness of data and interpretation of the relative shares of global climate finance across different thematic areas or sectors. Some data sources, such as those for renewable energy, provide activity-level data but may make country- and technology-level assumptions on finance flows to fill data gaps.

8. It is encouraging that countries are increasingly adopting domestic climate finance reporting systems. Regarding domestic climate finance, although more countries are developing climate finance reporting systems, time lags in their implementation mean there is limited data availability for 2021–2022. Amounts in relation to public expenditure may refer to ex ante budget allocations or ex post actual expenditure. Furthermore, the climate relevance of activities reported may refer to weighted criteria per activity or to positive activity lists.

9. Data on international climate finance flows are compiled using various methodologies and have varying interpretations. Flows from developed to developing countries – covering finance provided, mobilized and received – include a mix of data based on disbursements to projects and recipients in the given year or on financial commitments made in the reporting year to activities that may be implemented over several years. Information on South–South cooperation in relation to climate finance flows remains significantly underreported. The classification of data, such as by geographical region or granularity, is not uniform across data sources.

10. 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 in order to help to address these challenges and limitations.

II. Key findings

A. Methodological issues related to transparency of climate finance

11. In response to the mandate from COP 28,[7] the SCF considered updating the operational definition of climate finance that was identified in the first BA: 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.

5) See https://unfccc.int/sites/default/files/resource/Call_for_evidence_BA6.pdf.

6) Primary flows refer to transactions and investments that contribute directly to climate outcomes, while non-primary flows, such as reselling stakes or public trading, are excluded as they involve exchanging existing assets, not new investments.

7) Decision 5/CP.28, para. 6.

12. Four options were considered:

(a) No update, thereby confirming the current definition in use;

(b Updating the definition as follows: Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, increasing adaptive capacity, and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, and includes financing for activities that result in measurable action and impact towards achieving the goals of the Paris Agreement and the objective of the Convention;

(c) Updating the definition as follows: Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, increasing adaptive capacity, and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, and includes financing for actions identified in a country's nationally determined contribution, adaptation communication, national adaptation plan, long-term low-emission development strategy or other national plan for implementing and achieving the goals of the Paris Agreement and the objective of the Convention;

(d) Combining the options in paragraph 12(b–c) above: Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, increasing adaptive capacity, and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, and includes financing for measurable actions for implementing and achieving the goals of the Paris Agreement and the objective of the Convention, including those identified in a country's nationally determined contribution, adaptation communication, national adaptation plan, long-term low-emission development strategy or other national plan.

13. The SCF agreed to apply the option referred to in paragraph 12(c) above to its future work on BAs.

14. The completeness of Parties' reporting of financial support is improving. Preliminary data on climate finance provided and mobilized in 2021–2022 for BTRs show that more Parties are expanding the scope of their reporting to include finance mobilized through public interventions. However, there remains variation across Parties in the reporting of information on finance provided and mobilized, in accordance with the ETF, which, alongside the limitations of the reporting system, continues to hinder data aggregation.

15. Since the fifth BA, the number of non-Annex I Parties that have submitted a BUR has risen to 104, up from 79, including 21 Parties submitted their second, third, fourth or fifth BURs. Overall, 86 per cent of those 104 BURs contain information on climate finance received, almost all of which in tabular format. More non-Annex I Parties are reporting information on the use, impact and results of climate finance received: from 6 per cent of Parties covered in the fifth BA to 9 per cent in the sixth BA.

16. Also since the fifth BA, five more countries and jurisdictions have established climate finance tracking systems, a 10 per cent increase. At least 55 countries and jurisdictions have reported that climate finance tracking systems are in place (32) or are under development (23), although associated financial data were only available for 20 jurisdictions. Where budget tagging systems are in place, international climate finance flows are regularly tracked. Recent methodological additions to some climate budget tagging approaches include the coverage of harmful expenditure in addition to climate-relevant expenditure, while this approach is currently not widely adopted.

17. More green and/or sustainable finance taxonomies and methodologies under development are referring to supporting the goals of the Paris Agreement and consideration of national circumstances to support implementation of nationally determined contributions and national adaptation plans. Taxonomies and eligibility lists to support climate-related investments have proliferated globally in recent years. While 21 jurisdictions have taxonomies that have been published or are in use, another 38 taxonomies are under development, an increase of almost 75 per cent since the fifth BA. Sustainable finance taxonomies have been or are being developed across all regions, with wide coverage in Asia (14 existing frameworks and 15 under development), Europe (2 existing, in particular the European Union Taxonomy, and 1 under development), Latin America and the Caribbean (2 existing frameworks and 13 under development) and increasingly also in Africa and Oceania (2 and 1 existing frameworks and 5 and 3 under development respectively). Developing countries frequently receive technical assistance and

support for taxonomy development from international financial institutions, MDBs, United Nations agencies, bilateral development agencies and non-governmental organizations. A lower number of climate-related taxonomies are currently considering adaptation objectives (12), as compared with mitigation (all), which is often the initial focus area of taxonomies, and a majority (15) of taxonomies in use entail components of disaster risk reduction and management, or loss and damage, either as a stand-alone category or as activities within a diverse set of economic sectors.

18. **Innovative systems for measuring outcome and impact of climate finance are being explored, in particular in the areas of resilience and just transitions**. Multilateral and bilateral finance institutions continue to report on mitigation and adaptation outcomes at the project level, while there is still less coverage of outcomes at the portfolio level. After updates to results and impact measurement frameworks or the onset of new allocation periods, comprehensive reporting of results at the portfolio level of the main multilateral climate funds is being rolled out. Some key updates that contribute to providing new perspectives on resilience impacts and just transitions include the World Bank Resilience Rating System and the Climate Investment Funds Accelerating Coal Transition monitoring and reporting toolkit. While all MDBs and the International Development Finance Club individually track indicators of climate-relevant results at the project and portfolio level, no joint reporting thereof has been conducted in the context of their joint MDB climate finance report. Further, at least 35 other bilateral and multilateral development finance providers apply and track indicators of climate-related results.

19. While differences across individual results measurement frameworks continue to exist, considerable similarities in methodologies can be identified across the landscape of multilateral and bilateral finance institutions. The quantification of GHG emissions reduced or avoided remains the most common indicator of mitigation impact, in addition to indicators of energy access enabled or renewable energy capacity installed. Core indicators of the impact of adaptation actions remain more diverse than those for mitigation, focusing on the number of (direct or indirect) beneficiaries, the hectares of land protected or subject to climate-resilient practices, and the number of institutions, policies, assets or systems introduced that contribute to increasing adaptive capacity or that mainstream climate resilience, such as the number of training sessions conducted or early warning systems installed.

B. Overview of climate finance flows in 2021–2022

20. **Global climate finance flows in 2021–2022 increased by 63 per cent compared with those in 2019–2020, reaching an annual average of USD 1.3 trillion.** The growth in finance flows in 2021–2022 was driven largely by increased investment in key mitigation sectors, including sustainable transport (96 per cent increase on 2019–2020), clean energy systems (53 per cent increase) and buildings and infrastructure (41 per cent increase). The increase in investment in transport was due mainly to greater investment in electric vehicles and efforts to kick start economic revival following the coronavirus disease 2019 pandemic, supported by increased government expenditure. Investment in clean energy has risen even as the costs of solar and wind power technologies have continued to decrease, leading to a higher rate of clean energy capacity installed. Investment in buildings and infrastructure can be attributed to government stimulus programmes, new regulations, record sales of heat pumps and a global rebound in construction activity. Figure 1 provides a breakdown by sector of the trend in global climate finance flows, and figure 2 provides an overview of global climate finance and finance flows from developed to developing countries in 2021–2022.

21. **Tracked adaptation finance increased by 28 per cent to an annual average of USD 63 billion in 2021–2022, primarily driven by the commitments of bilateral and multilateral DFIs**. Most of the tracked climate finance was for mitigation, with adaptation representing 11 per cent of the total, approximately the same share as in 2019–2020. About 49 per cent of adaptation finance was spent in the water and wastewater sector, followed by 36 per cent on cross-sectoral measures such as disaster risk management, policy and national budget support and capacity-building, and the remainder in the AFOLU (11 per cent) and transport (2 per cent) sectors. Despite the critical importance of tracking adaptation finance, significant data gaps and barriers to reporting limit the ability to capture global flows, particularly of private capital.

22. **Eastern Asia, Northern and Western Europe, and North America continue to account for the majority of global climate finance by region**, with 42, 22 and 12 per cent of commitments in 2021–2022 respectively, primarily driven by domestic commitments in China, the United States of America and the European Union; while other regions, covering Africa, Asia, Europe, Latin America and the Caribbean, and Oceania, accounted for

the remaining less than 25 per cent. Overall, 2.6 per cent (or USD 33 billion) of the total global climate finance went to or was distributed within the LDCs, 1.0 per cent (or USD 13 billion) went to the SIDS and 15 per cent (or USD 188 billion) went to developing countries excluding China.

23. **More than half of global climate finance was provided in the form of debt instruments, while grant finance more than doubled in absolute terms but still accounted for 6 per cent of the total flows.** Debt finance, both low-cost debt[8] and market-rate debt,[9] amounted to USD 755 billion, or 59 per cent of the total, a share similar to that in 2019–2020. This was split between low-cost and market-rate debt at 12 and 88 per cent respectively. Grant finance increased substantially from USD 33 billion in 2019–2020 to USD 77 billion in 2021–2022, but its share in the total remained stable at 6 per cent.

24. **Data on domestic climate finance from national and subnational governments remain limited.** Annualized estimates for 2021–2022 amount to USD 195 billion for eight countries and the European Commission. This is an increase compared with the estimates for 2019–2020 (USD 102 billion), attributed primarily to the budgets of the European Union, France and the United Kingdom of Great Britain and Northern Ireland. More countries are adopting a climate budget tagging system within national budget planning or conducting research into their climate expenditure. At the subnational level in OECD member countries, USD 595 billion was allocated to climate-significant expenditure across various sectors in 2019 (the latest year available), an average of 1.8 per cent of their gross domestic product. Data on national and subnational governments remain limited, largely attributed to limited technical and institutional capacity, lack of unified and systematized information and limited access to national climate scenarios and projections, etc.

25. **Preliminary data from Parties on climate finance provided and mobilized in 2021–2022 show that climate-specific financial support averaged USD 58.3 billion per year, an increase of 43 per cent since 2019–2020.** These data are difficult to compare with the data reported in previous BAs, as several Parties have begun reporting on mobilized finance for the first time as they prepare for the implementation of the new reporting formats under the ETF. Financial support provided through bilateral, regional and other channels increased by 21 per cent on average annually compared with 2019–2020 to reach USD 31.8 billion and constitutes two thirds of total climate-specific financial support. Financial support provided through multilateral channels, which generally consists of contributions or inflows to multilateral climate funds and multilateral financial institutions, including MDBs, increased by 13 per cent compared with 2019–2020, amounting to USD 10.0 billion on average annually, and USD 9.9 billion on average annually was reported as finance mobilized, primarily by bilateral finance agencies and institutions. The latter two categories constituted 17 per cent of total climate-specific finance. The shares of adaptation, mitigation and cross-cutting finance have remained relatively stable since 2019–2020. Mitigation increased by one percentage point to 53 per cent, while adaptation decreased by two percentage points to 22 per cent and cross-cutting finance, which serves both adaptation and mitigation objectives, increased by two percentage points to 22 per cent. These preliminary data do not include outflows from multilateral institutions, which are significantly larger in scale than inflows, and should be considered in the context of a holistic representation of the finance landscape. Further, they do not include private finance mobilized by multilateral institutions.

26. **UNFCCC funds and other multilateral climate funds[10] approved a combined USD 4.1 billion and USD 3.3 billion for climate change projects in 2021 and 2022 respectively.** The annual average for 2021–2022 (USD 3.7 billion) is similar to the 2019–2020 average (USD 3.6 billion), owing mainly to the new addition of the International Monetary Fund Resilience and Sustainability Trust providing USD 1 billion in climate finance in 2022. On a comparable basis to 2019–2020, commitments from multilateral climate funds decreased by 13 per cent on annual average in 2021–2022, owing largely to certain funds, such as the GCF, reaching the end of their programming period. Together, the GCF, the GEF, the AF, the LDCF and the SCCF committed USD 3.3 billion in 2021 and USD 1.7 billion in 2022 to climate projects. The financing from these funds is expected to rise further as they receive new replenishments. In terms of inflows, the GCF raised USD 12.7 billion from 32 countries in its second replenishment period in 2023 for the programming period between 2024 and

8) Low-cost debt refers to loans extended at terms preferable to those prevailing on the market.

9) Market-rate debt refers to loans extended under standard market conditions; examples are term loans, credit facilities, bridge loans and mezzanine debt.

10) Multilateral climate funds refer to the GCF and the GEF (operating entities of the Financial Mechanism), the LDCF and the SCCF (funds serving the Convention and the Paris Agreement), the AF (fund established under the Kyoto Protocol and also serving the Paris Agreement) and others, including those operating under the Climate Investment Funds. See table 2.7 of the technical report for more details.

2027, an increase of more than 27 per cent on the first replenishment. A total of 29 governments pledged USD 5.33 billion for the eighth replenishment period of the GEF (covering 2022–2026), an increase of more than 30 per cent on the seventh replenishment. In 2023, the LDCF received USD 141.7 million from six countries, while the SCCF received USD 32.5 million in new pledges from three countries (Canada, Spain and United Kingdom), a 65 per cent increase compared with the previous year's pledges.

27. **MDBs provided USD 50.7 billion and USD 60.7 billion in climate finance to developing and emerging economies in 2021 and 2022 respectively.** The annual average of USD 55.7 billion in 2021–2022 represents a 21 per cent increase compared with the 2019–2020 amount. The attribution of these flows to developed countries is calculated at 73–78 per cent of the aggregate (or USD 37.4 billion to USD 40.6 billion) in 2021–2022, depending on the attribution approach.

28. **After stagnating between 2017 and 2021 at USD 14 billion, private finance mobilized through bilateral and multilateral channels, attributed to developed countries, increased to USD 22 billion in 2022**. Private finance mobilized by bilateral providers increased to USD 9.2 billion in 2022 after remaining between USD 4 billion and USD 6 billion since 2017. Private finance mobilized by multilateral climate funds stood at USD 1.8 billion and USD 2.0 billion in 2021 and 2022 respectively. Corresponding numbers for MDBs were USD 7 billion and USD 10.7 billion, part of which is also attributed to developing countries given their shareholdings in MDBs.

29. **South–South climate finance flows are increasing, with 22–27 per cent of all climate finance provided through MDBs attributed to developing countries in 2021–2022, amounting to USD 13.3–19.8 billion.**[11] Financial commitments from bilateral and regional development finance institutions based in non-OECD countries to projects in other non-OECD countries amounted to USD 2 billion and USD 2.7 billion in 2021 and 2022 respectively, which represented a more than fourfold increase on the 2020 level of USD 0.5 billion. An example of South–South cooperation is Saudi Arabia's commitment of USD 1 billion in 2021, as part of a USD 10.4 billion regional fund, to reduce GHG emissions in the Middle East. Furthermore, MDBs such as the Islamic Development Bank increased its climate finance outflows by 139 per cent on annual average from 2019–2020 to 2021–2022 to reach USD 867 million, while the New Development Bank reported climate finance outflows for the first time in 2022, in the amount of USD 466 million. Several developing countries are shareholders of MDBs, with the level of ownership ranging between 22 and 27 per cent depending on the methodology applied. On the basis of this, the attribution of climate finance from MDBs to developing countries increased from an annual average of USD 11.8 billion in 2019–2020 to USD 16.6 billion in 2021–2022. However, these are estimates are likely underestimated as they are generally based on voluntary reporting to the OECD and other organizations.

11) This represents an average of USD 11.9–14.7 billion in 2021 and USD 18.3–21.3 billion in 2022. See table 2.8 of the technical report for more details.

Figure 1

Global climate finance flows in 2019–2022 by sector
(Billions of United States dollars)

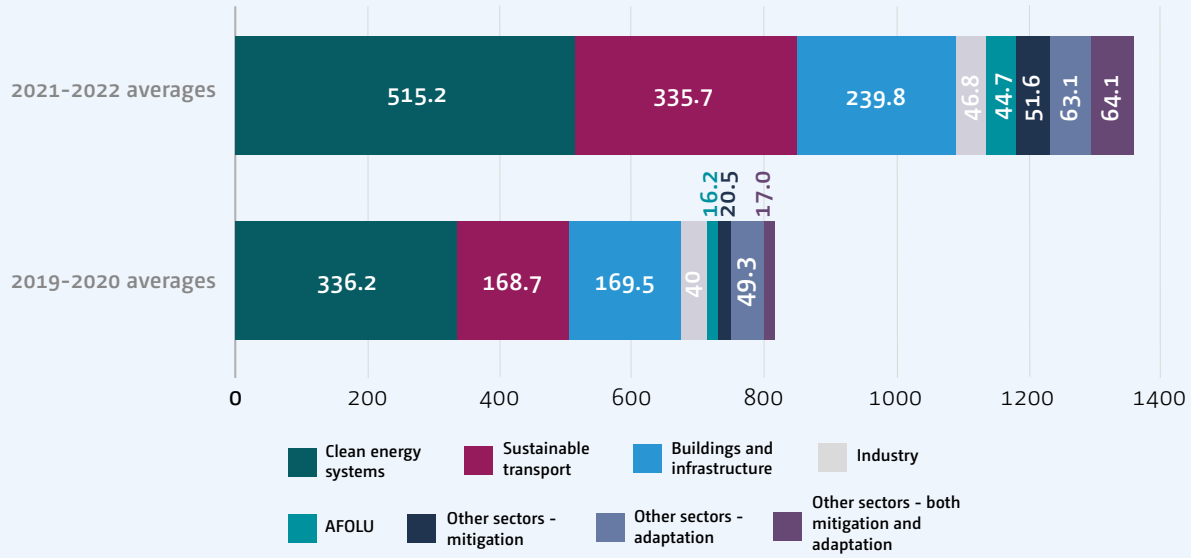


Figure 2

Climate finance flows in 2021–2022
(Billions of United States dollars, annualized)

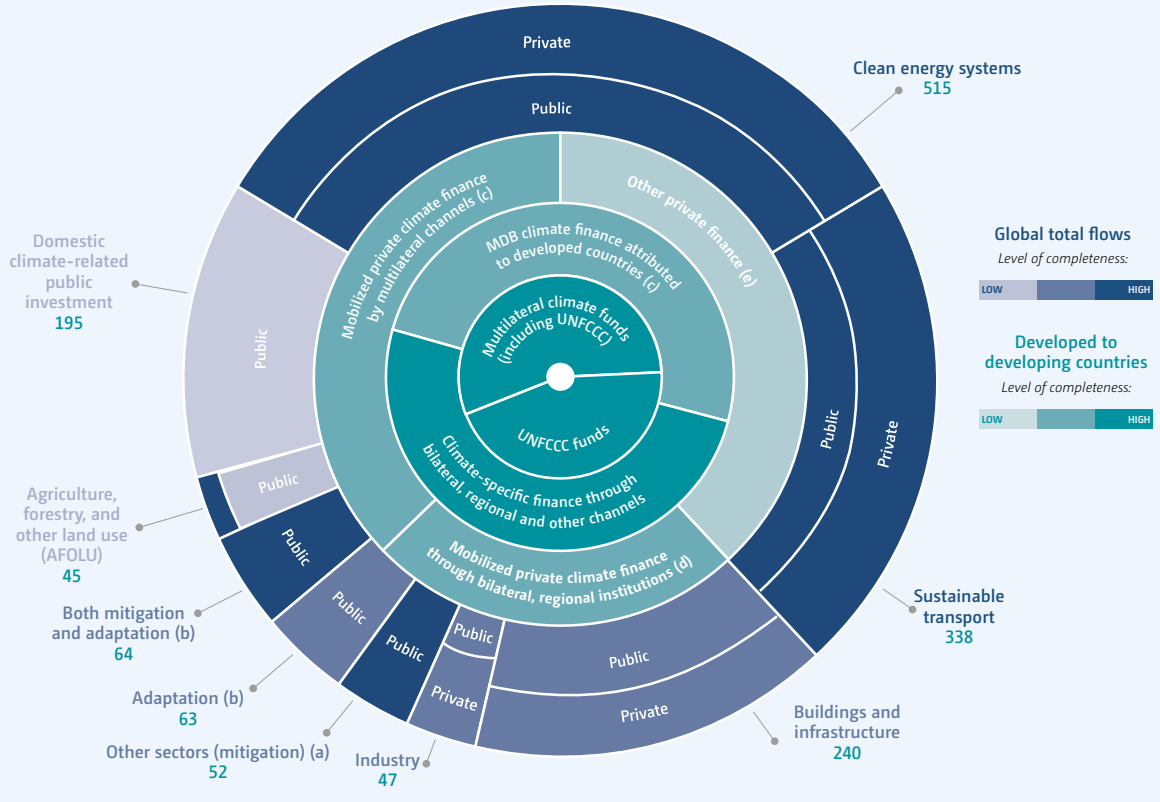


Figure 2 (continued)

Climate finance flows in 2021–2022 (Billions of United States dollars, annualized)

Sector			2019	2020	2021	2022	Data quality	Data completeness	Sources of data and relevant chapter
Global flows	Clean energy systems	Total	325	347	464	566	High	High	BNEF, CPI (2023), CPI (2024); chapter 2.2.2
		Public	108	116	212	293			
		Private	217	232	252	273			
	Sustainable transport	Total	175	162	263	409	High	High	IEA (2023), CPI (2023); CPI (2024); chapter 2.2.3
		Public	112	86	100	152			
		Private	63	76	162	257			
	Buildings and infrastructure	Total	160	180	225	255	High	Medium	CPI (2023), CPI (2024), IEA (2023); chapter 2.2.4
		Public	26	40	94	124			
		Private	134	140	130	131			
	Industry	Total	45	35	46	48	Medium	Medium	CPI (2023), CPI (2024), IEA (2023); chapter 2.2.5
		Public	9	5	3	14			
		Private	36	30	43	33			
	Agriculture, forestry, and other land use (AFOLU)	Total	15	19	45	45	–	–	CPI (2023), CPI (2024); chapter 2.2.6
		Public	15	18	37	36	High	Medium	
		Private	0.3	1	8	8	High	Low	
	Other sectors - mitigation[a]	Total	25	17	53	50	–	–	CPI (2023), CPI (2024); chapter 2.2.7
		Public	24	15	43	37	High	High	
		Private	1	2	10	13	High	Low	
	Adaptation[b]		42	56	55	71	High	Medium	CPI (2023), CPI (2024)based on multiple sources; chapter 2.2.8
	Both mitigation and adaptation[b]	Total	15	19	54	74	–	–	CPI (2023), CPI (2024)
		Public	14	16	46	65	High	High	
		Private	1	3	9	9	High	Low	
	Domestic climate-related public investment		102	102	205	185	Low	Low	Country-level reporting, National Landscape, CPEIRs; chapter 2.3

Figure 2 (continued)

Developed to developing countries	UNFCCC funds	2.2	2.8	3.3	1.7	High	High	Chapter 2.5.2, Fund financial reports, CFU, OECD 2024
	Multilateral climate funds (including UNFCCC)	3.5	3.8	4.1	3.3			
	Climate-specific finance through bilateral, regional and other channels	31.7	31.9	34	42.7	High	High	Chapter 2.5.1 Annex II Party preliminary data from BTRs, subject to change
	MDB climate finance attributed to developed countries[c]	30.5	33.2	30.5	33.2	Medium	Medium	Chapter 2.5.2 OECD 2024
	Mobilized private climate finance by multilateral channels[c]	8.6	8.0	8.8	12.7	Medium	Medium	Chapter 2.5.4 OECD 2024
	Mobilized private climate finance by bilateral, regional institutions	5.8	5.1	5.6	9.2	Medium	Medium	
	Other private finance[d]	7.3	9.6	11.5	11.8	Medium	Medium	Chapter 2.5.4, CPI 2024, based on multiple sources

Notes: (1) Figure note (a): other mitigation investments include waste and wastewater, information and communications technology and other cross-sectoral investments; (2) Figure note (b): includes investments from amounts listed by sector above that are discounted when calculating the global aggregate to avoid double counting; (3) Figure note (c): flows are from developed to developing countries, see section 2.5.2 of the technical report of the sixth BA for further information; (4) Figure note (c): estimates include private finance mobilized through public interventions by developed countries; (5) Figure note (d): this includes private finance in addition to finance mobilized through bilateral and multilateral channels and institutions.

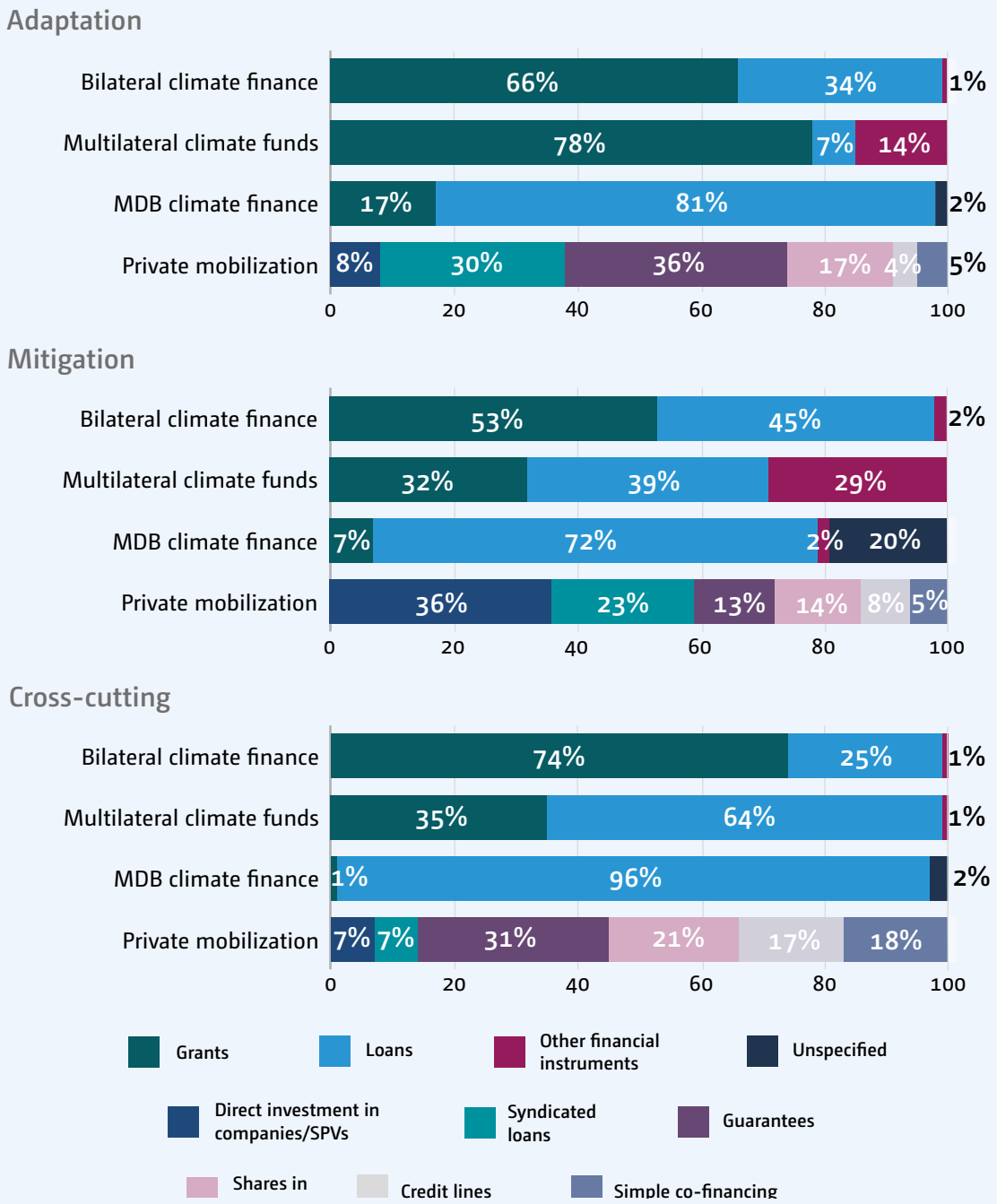
C. Assessment of climate finance flows in 2021–2022

30. **The shares of adaptation, mitigation and cross-cutting finance from developed to developing countries in 2021–2022, through all channels of bilateral finance, the outflows of multilateral climate funds and MDBs, and private finance mobilized, remained similar to those in 2019–2020**. In 2021–2022, on average mitigation attracted a 51 per cent (USD 19.6 billion) share of bilateral climate finance, 31 per cent (USD 1.1 billion) of multilateral climate fund finance and 62 per cent (USD 30.4 billion) of MDB climate finance. Corresponding numbers for adaptation are 27 per cent (USD 10.5 billion), 16 per cent (USD 0.6 billion) and 36 per cent (USD 16.4 billion). The share of cross-cutting finance from multilateral climate funds, contributing to both adaptation and mitigation, increased substantially to 51 per cent (USD 1.9 billion) in 2021–2022 from 35 per cent (USD 1.1 billion) in 2019–2020.

31. **Finance from multilateral climate funds was significantly grant based, particularly for adaptation**. In 2021–2022, 78 per cent of adaptation finance provided by multilateral climate funds was in the form of grants (compared with almost 100 per cent in 2019–2020) and 7 per cent was concessional loans (see figure 3). MDB finance remains predominantly loan based, with 81 per cent provided as largely concessional loans. Across all channels, private climate finance was mobilized by public finance providers through a diverse range of instruments, depending on their mandate, the relevance of instruments and country and sectoral context, including direct investments in companies or special purpose vehicles (30 per cent), syndicated loans (21 per cent), guarantees (18 per cent) and shares in collective investment vehicles (16 per cent). While direct investments in companies or special purpose vehicles were made by all public finance actors, use of other instruments varied among them.

Figure 3

Public climate finance and private climate finance mobilized from developed to developing countries in 2021–2022, by theme, source and financial instrument

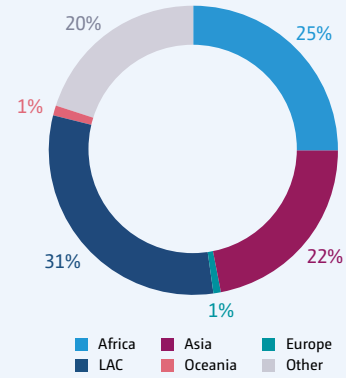


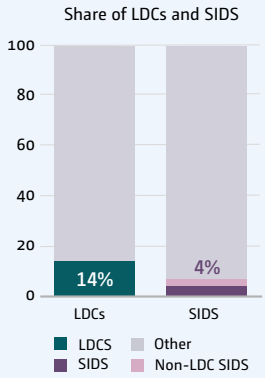
Notes: Bilateral climate finance is not included as preliminary estimates provided by Parties to support preparation of the sixth BA are partial, provisional and subject to change once official data have been submitted in BTRs on 31 December 2024. A significant proportion of the preliminary data does not include information on instruments used.

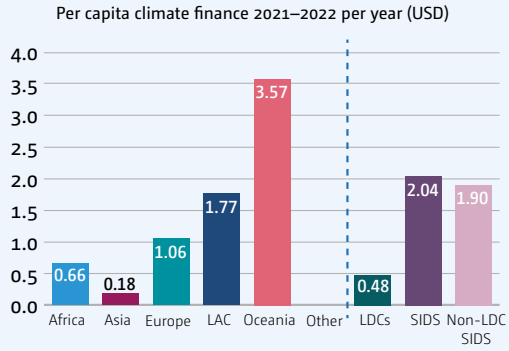
Figure 4

Geographical distribution of climate finance by volume and on a per capita basis by channel in 2021–2022

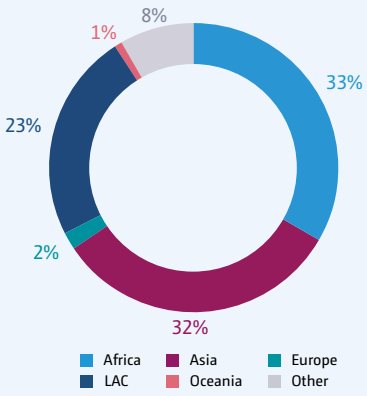
Multilateral climate funds: USD 3.7 billion per year, 2021–2022

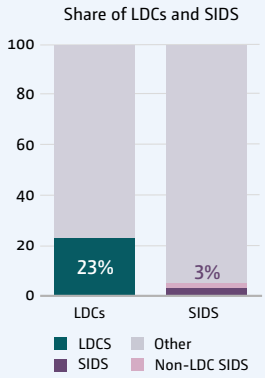


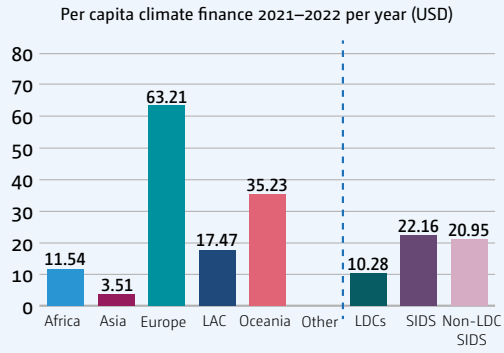




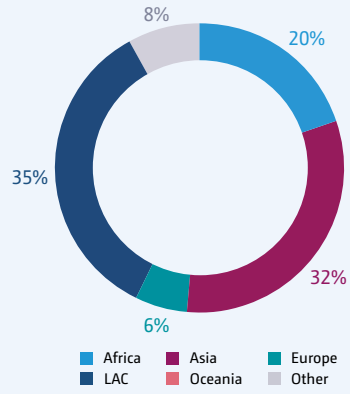
MDBs: USD 49.0 billion per year, 2021–2022

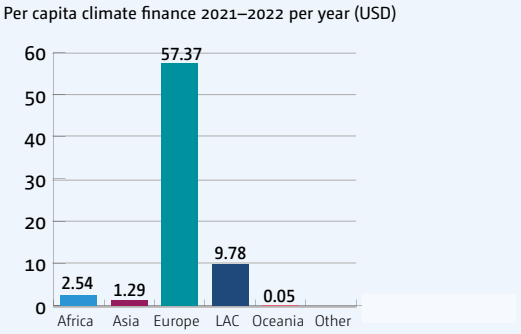






Private finance mobilized: USD 18.2 billion per year





Notes: Bilateral climate finance is not included as preliminary estimates provided by Parties to support preparation of the sixth BA are partial, provisional and subject to change once official data have been submitted in BTRs on 31 December 2024. A significant proportion of the preliminary data does not include information on geographical distribution of climate finance provided and mobilized.

32. **Asia and Africa received the most of MDB climate finance , while Latin America and the Caribbean received the most in climate finance from multilateral climate funds and from private finance mobilized.** Latin America and the Caribbean received 31 per cent of climate finance from multilateral climate funds in 2021–2022, driven by funding received by Costa Rica from the International Monetary Fund Resilience and Sustainability Trust. Africa and Asia secured 25 and 22 per cent of finance from multilateral climate funds respectively. Most MDB finance was directed to Africa and Asia (33 and 32 per cent respectively), while most private finance mobilized went to Latin America and the Caribbean (35 per cent), Asia (32 per cent) and Africa (20 per cent) (see figure 4).

33. **Support provided to the LDCs and SIDS by multilateral climate funds decreased in 2021–2022 compared with 2019–2020, but their share of MDB finance remained stable.** In 2021–2022, funding provided to the LDCs accounted for 14 per cent of approvals by multilateral climate funds and 23 per cent of MDB climate finance. On a per capita basis, climate finance from multilateral climate funds and MDBs to the LDCs and SIDS is higher than the averages across all developing countries. Grants accounted for 56 per cent of multilateral climate fund commitments and 40 per cent of MDB commitments for the LDCs and SIDS. Funding provided to SIDS accounted for 4 per cent of approvals by multilateral climate funds (from 7 per cent in 2019–2020) and 3 per cent of MDB climate finance. International public climate finance flows to SIDS are predominantly adaptation focused, and grants play an important role in SIDS, ranging between 33 and 99 per cent of the climate finance flows across the channels analysed.

34. **Efficient access to climate finance is an important priority but has remained challenging for developing countries and their institutions.** Progress in enhancing access through multilateral climate funds continues, such as through the accreditation of entities to the multilateral climate funds, which saw a 16 per cent increase, from 123 to 143 entities, in 2023. Readiness grants and support for enabling activities are increasing through multilateral climate funds and other facilities and initiatives that support project preparation. Access to climate finance through MDBs differs depending on the entity and its operational models, similarly to access through bilateral channels, albeit there are fewer sources of information providing evidence to assess the status of access to climate finance through those channels. Access to climate finance is increasingly being discussed in the context of developing countries' macroeconomic conditions, governance, enabling environments and their impact on capital market access, particularly as it relates to debt sustainability and to different financial instruments.

35. **Country platforms continue to be developed in the context of seeking programmatic and enhanced country ownership, tailored to developing countries' needs and priorities**. Country ownership, which is fundamental to the delivery of effective climate finance, is a broad concept encompassing active stakeholder engagement, links between climate policies and economic growth and development policies, and national spending and tracking systems for climate finance. Four Just Energy Transition Partnerships have been announced since 2021, with more under way, as well as country platforms addressing other thematic areas or encompassing regional efforts. As such country platforms emerge, challenges to realizing their potential through delivery of finance are being faced by countries, stakeholders and communities. Challenges include considering local communities and the workforce in the planning and design stage; limited in-country institutional capacities to conduct pre-feasibility studies and financial modelling; ensuring strong political leadership and coordination of public policy across government ministries and agencies; and lack of clarity on the role of MDBs, the 'new and additional' component of International Partners Group funding, the role of private financial institutions in delivering accessible funding, and the replicability and accessibility of Just Energy Transition Partnerships to other developing countries.

36. **Climate finance is leading to the achievement of a greater amount of portfolio-level emission reductions and reaching a greater number of beneficiaries over time in relation to adaptation and climate resilience.** Multilateral climate funds reported a combined 123.2 Mt CO2 eq emission reductions achieved and 68.6 million beneficiaries reached through their interventions. Expected results from the portfolios of approved or currently implemented projects are orders of magnitude higher, for example 3,602 Mt CO2 eq emission reductions and 722 million direct and/or indirect beneficiaries across project portfolios. While MDBs and DFIs report on the portfolio-level impacts of their operations annually, with a focus on GHG emission reductions and number of beneficiaries, they are not linked to climate-specific interventions and so cannot be attributed directly to the volume of climate finance reported by MDBs or DFIs. Meanwhile, bilateral contributors have different approaches to reporting on

the impacts of financed activities.

37. Gender considerations are being strengthened in the governance, project design and impact measurement of multilateral climate funds, and such efforts have stimulated commitments by public DFIs towards gender-responsive climate finance. Gender equality and the effective participation of women and girls are critical to climate action, with climate investments applying a gender lens being more efficient, effective and impactful. The gender policy of the GCF has played an important role in encouraging the European Bank for Reconstruction and Development to integrate gender considerations into its climate investments, while the Climate Investment Funds has developed a reference framework for gender-responsiveness in Asian Development Bank investments. The 2024 SCF Forum explored opportunities and existing challenges related to accelerating climate action and resilience through gender-responsive financing.[12] Data and evidence gaps pertaining to the gender and climate finance nexus remain and continues to be a blind spot in many climate finance needs assessments.

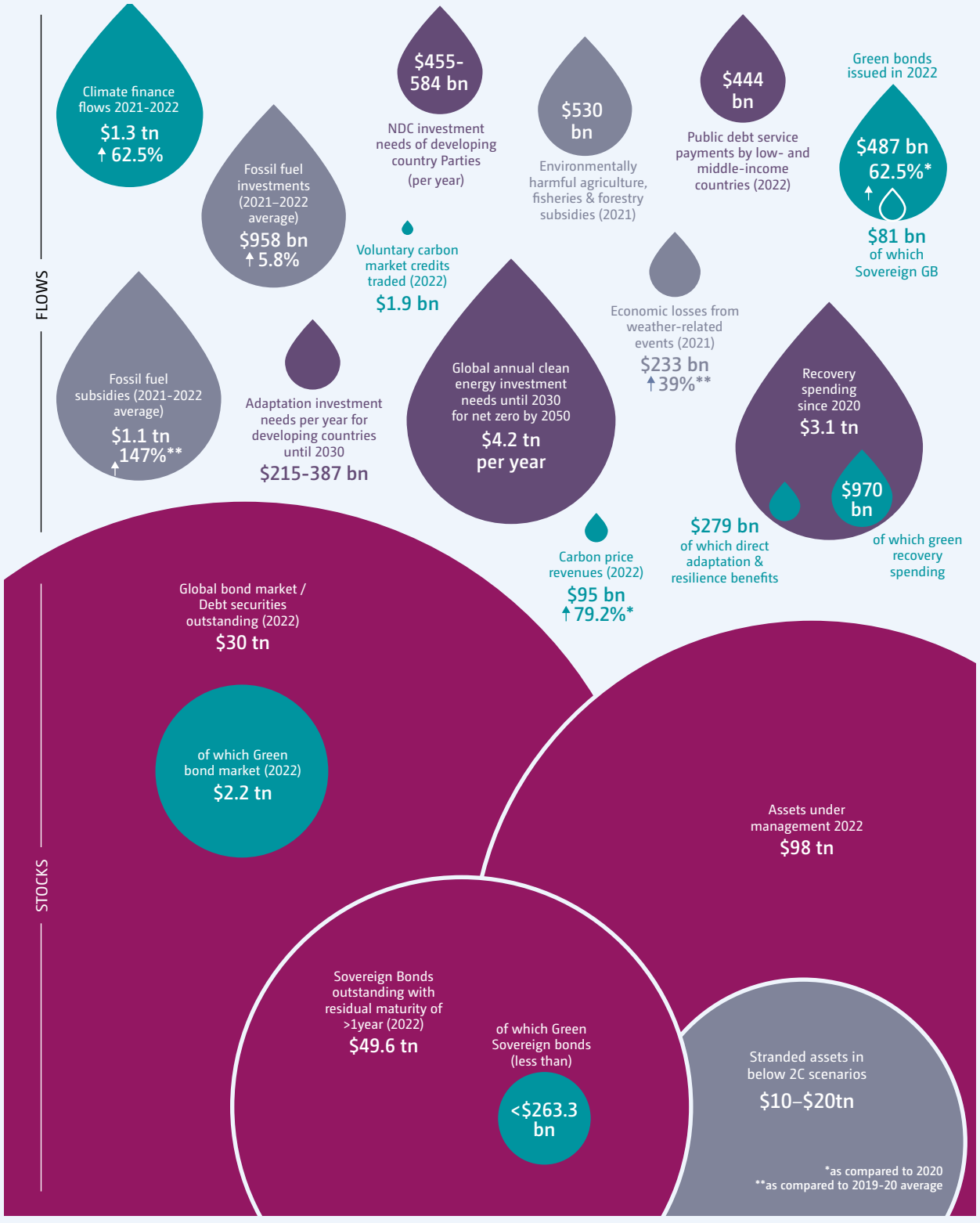
38. Global total climate finance flows remain well below available estimates of the investment needed to keep the goals of the Paris Agreement within reach in this critical decade, though sufficient global capital is available to meet these needs (see figure 5). Continued challenges related to debt sustainability, slowing economic growth and a mismatch between demands on the State and fiscal resources are being felt across many countries. Developing countries in particular face significantly higher sovereign borrowing and financing costs for private sector investments than high-income countries, owing to a variety of real and perceived investment risks. Public interventions aimed at mobilizing private investment, including through loans for climate projects, can help to address some of the reasons for these higher costs and de-risk private sector investment. Moreover, global efforts to continue to make progress towards climate change mitigation goals, in particular the goal of the Paris Agreement of holding global warming to well below 2 °C and pursuing efforts to limit the temperature increase to 1.5 °C, will affect the costs of adapting to the adverse effects of climate change.

39. The scale and speed needed for transitions to low-emission climate-resilient development pathways suggest that a sole focus on positive climate finance flows will be insufficient to meet the goals 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 should integrate climate risks into decision-making and avoid increasing the likelihood of negative climate outcomes. Domestically, countries are making efforts to consider fiscal policies for climate action, financial policies and regulations and the integration and management of climate risk in relation to financial decision-making processes by private actors and the financial sector. There remains a 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.

12) See https://unfccc.int/2024-SCF-Forum

Figure 5

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



D. Mapping of information relevant to Article 2, paragraph 1(c), of the Paris Agreement and its reference to Article 9 thereof

40. Every second BA includes a mapping of available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof, in a dedicated fourth chapter. The mapping considers policies and measures considered to be relevant by public and private actors, and domestic and international initiatives, including developments in existing and new initiatives, where they have relevance to both domestic and international as well as public and private finance flows related to climate action.

41. Article 2, paragraph 1(a–c), 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: 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; increasing the ability to adapt to and foster resilience against the adverse impacts of climate change; and making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development. Article 2, paragraph 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.

42. **While countries and non-State actors are discussing and taking action relevant to Article 2, paragraph 1(c), of the Paris Agreement, different views on and approaches to the goal remain.** Since the publication of the fourth BA in 2020, avenues for discussing Article 2, paragraph 1(c), including its reference to Article 9 thereof, have included the SCF work on two syntheses of views from Parties and non-Party stakeholders and a further mapping of available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof; the Sharm el-Sheikh dialogue on the scope of Article 2, paragraph 1(c), and its complementarity with Article 9; and the first global stocktake,[13] which concluded in 2023. While these processes have progressed discussions, disparate views remain on what is in the scope of and how to achieve Article 2, paragraph 1(c), of the Paris Agreement. There has also been increased engagement by private and public actors considered relevant to the goal under Article 2, paragraph 1(c), of the Paris Agreement. The Intergovernmental Panel on Climate Change and the first global stocktake have both concluded that progress towards achieving consistency of financial flows with the goals of the Paris Agreement remains slow and uneven across regions and sectors.

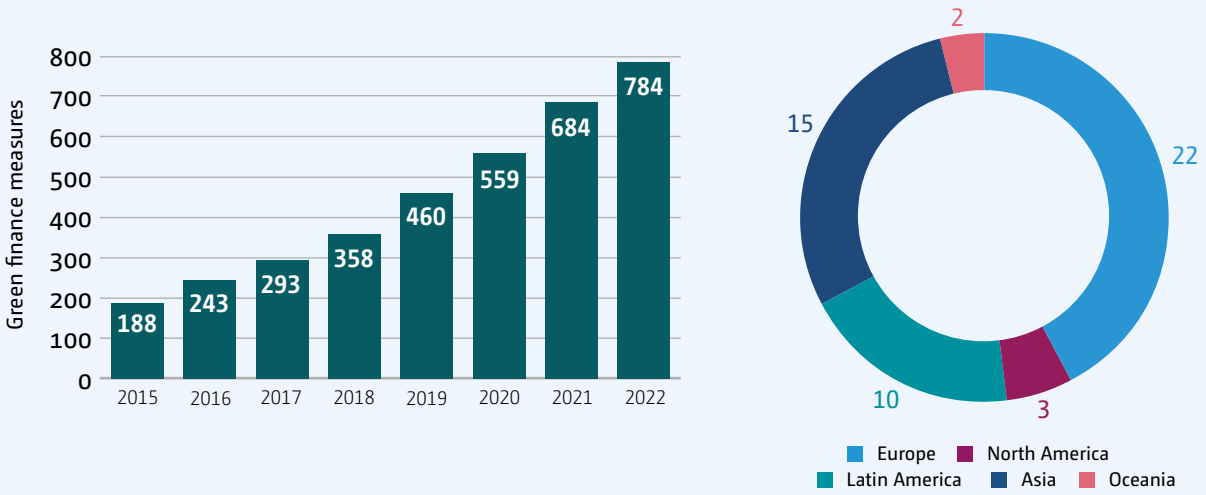
43. **In the mapping of information relevant to Article 2, paragraph 1(c), including its reference to Article 9, several contextual issues arise that are not reconciled by the mapping exercise.** These relate to the extent and diversity of finance actors addressed by the goal that take actions that affects finance flows; divergence in the understanding and use of terms; how the diversity of national circumstances, plans and priorities or Party responsibilities should be factored into the scope and implementation of Article 2, paragraph 1(c); and divergent interpretations of the scope and nature of finance flows addressed by Article 2, paragraph 1(c), and Article 9.

44. **A majority of countries have articulated policies and measures within domestic frameworks that are considered relevant to the goal or to sustainable or green finance.** In 2021–2022, policy and regulatory measures were put in place in over 100 jurisdictions by public authorities such as governments, central banks, financial regulators and public finance institutions, a 40 per cent increase compared with 2020. Regulatory authorities globally are increasingly integrating climate change into their consideration of financial sector stability through a suite of actions. Governments are making use of fiscal policies and public expenditure to channel finance flows for climate-consistent purposes, such as through budget allocations, pricing or non-pricing mechanisms and policies such as taxes and subsidies or investment incentives. Many have formulated overarching sustainable finance frameworks or road maps to connect individual measures (see figure 6).

13) As per decision 19/CMA.1, para. 36(d).

Figure 6

Growth in cumulative green finance policy and regulatory measures, 2015–2022, and representation of countries, by region, in private finance initiatives as at February 2024



45. **Where implemented, domestic carbon pricing instruments have incentivized low-cost emission reduction measures, but have been less effective, on their own and at prevailing prices, at promoting higher cost measures necessary for further reductions. An increasing number of governments have recognized carbon pricing as an effective method for integrating the costs of climate change into economic decision-making, thereby encouraging climate action.** Domestic carbon pricing instruments have continued to expand, with a significant share of revenues going to green spending priorities and welfare support. Carbon pricing instruments generated USD 95 billion in revenue globally in 2022, an increase of USD 10 billion compared with 2021. Almost 40 per cent of carbon pricing revenues are earmarked by governments for green spending and another 10 per cent for household or business compensation. As in previous years, carbon pricing measures remain concentrated in North America and Europe, with the European Union Emissions Trading System alone generating about 44 per cent of global revenues in 2022. On the other hand, the value of voluntary carbon markets surged from USD 136 million in 2017 to USD 2 billion in 2022 (a 1,371 per cent change).

46. **Non-pricing measures have been instituted to implement national and/or regional climate initiatives. Some countries prefer these measures owing to their national circumstances in accordance with the Intergovernmental Panel on Climate Change finding that effective policy packages would be comprehensive, consistent, balanced across objectives and tailored to national circumstances.** Non-pricing approaches include policies, targets and initiatives, as well as standards, awareness-raising, and international cooperation and financial tools. For example, the Middle East Green Initiative also adopts the circular carbon economy approach to advancing climate objectives in the Middle East through a suite of initiatives.[14]

47. **Sustained growth in private sector engagement is being observed through climate risk disclosure, and the adoption of net zero commitments, transition plans and financing targets, sustainable finance policies and principles.** Methodologies for climate-consistent finance flows that have evolved in the private sector differ in terms of ambition, timeline, sectoral coverage and scope of emissions considered, and degree to which adaptation or resilience is included. However, efforts to facilitate the interoperability of approaches are emerging, such as financial sector alliances, third-party target-setting initiatives, guidance documents and target-setting protocols. Efforts to complement target-

14) See https://www.greeninitiatives.gov.sa/about-mgi/.

setting with a focus on implementation have also seen growth in transition planning for corporates and financial institutions, although they differ in the definition and classification of specific climate investment targets. Investors have higher expectations for meeting climate and wider sustainability criteria, and market operators such as stock exchanges and credit rating agencies are making efforts to integrate climate into their operations to inform financial decision-making.

48. **Domestic and public sector initiatives that could be relevant to implementing Article 2, paragraph 1(c), have expanded their geographical scope since the fourth BA.** Such financial initiatives, which involve governments through engagement of financial regulators, central banks, regulators, ministries of finance, financial market operators and industry and environment, working in collaboration with banks, industry associations, financial centres and stock exchanges, have grown from representing 136 countries in 2022 to 151 countries across all initiatives as at the beginning of 2024. A number of countries have engaged in national planning processes around the financing of sustainable and/or climate action and, while a whole-of-government approach continues to be promoted, the need remains to engage subnational and local public and private actors, including regional and municipal authorities, civil society, non-governmental organizations, Indigenous communities, women, youth and the elderly. In recent years public DFIs have been moving towards implementation and tracking of efforts that they consider to be consistent with the Paris Agreement. There is also growth in multilateral public finance and government initiatives to shift or evolve the international financial system towards achieving more sustainable, climate-compatible and equitable outcomes.

49. **Private finance initiatives, including asset owners, asset managers and investors, and banking and insurance companies, continue to increase engagement in international initiatives and alliances relevant to Article 2, paragraph 1(c).** These act as convening platforms for building capacity and developing approaches to climate commitments, targets and methodologies for implementation of Article 2, paragraph 1(c), of the Paris Agreement. The growth of these initiatives has slowed in recent years with respect to financial assets, assets under management or market capitalization. However, they continued to expand across all regions with regard to the number of signatories, particularly in Asia, between 2020 and 2022, while remaining concentrated in Europe and North America (see figure 6).

50. **A number of insights emerged from the mapping of information relevant to Article 2, paragraph 1(c), including its reference to Article 9 thereof:**

(a) In the sixth BA, a shift was observed from the high-level commitments identified in the fourth BA towards actual transition and implementation planning. Mitigation continues to be a focus area of private sector actions. However, public actors and initiatives have acknowledged the gap in resilience and adaptation action and work to address this is under way. The mapping exercise reveals that the notion of transition finance and pathways for transition has received increased attention from public and private financial sector actors;

(b) Very few mapped actions by national or private actors are framed in the context of Article 2, paragraph 1(c), including its reference to Article 9. While diverse views exist as to how the two Articles relate, relevant activities that are undertaken by financial sector actors potentially include providing support for fostering sustainable finance markets in developing countries; ensuring that development finance is consistent with climate, environment and sustainable development goals; explicit efforts to increase investment in developing countries, including via country-led investment platforms; and plans to combine the support provided by developed country governments with other types of financing;

(c) Relevant public and private initiatives, collectively, have a footprint in every region of the world, although private initiatives tend to have a concentration of actors whose headquarters are in Europe or North America. The need for global cooperation, collaboration, learning and sharing of expertise has been emphasized by a number of actors and reflects the complexity and interconnectedness of finance flows and relevant actors and their mandates. While international interoperability can be beneficial for approaches relevant to Article 2, paragraph 1(c), there is also a clearly articulated demand for regional, sectoral and nationally appropriate approaches and methodologies for responding to the goal, and for integrating social sciences and equity perspectives into implementation approaches;

(d) Several challenges and barriers to the implementation of Article 2, paragraph 1(c), remain. These include data and methodological gaps, including for small and medium-sized enterprises,

climate-resilient pathways and scenarios that can guide actors. A multitude of methods, objectives, governance frameworks and tools that are not interoperable may increase fragmentation, transition costs and data inconsistencies. Actions relevant to Article 2, paragraph 1(c), both seek to address and remain constrained by the barriers to investment in developing countries (e.g. higher cost of capital and debt sustainability concerns). Little is known about the impacts of public and private efforts to implement Article 2, paragraph 1(c) on the real economy, because many actors are a number of steps removed from real economy activities. Concerns of greenwashing in tracking and monitoring of relevant approaches, highlighted in the fourth BA, continue to persist.

III. Recommendations

51. On the basis of the key findings herein, the SCF invites the COP and the CMA to consider the recommendations presented in the remainder of this chapter.

52. Recommendations related to methodological issues for transparency of climate finance are as follows:

(a) *Encourage* Parties to better track and report on climate finance provided, mobilized, needed and received in the new common tabular format for their BTR1 to the highest level of granularity possible, taking into account the flexibility for those countries that need it in the light of their capacities, in accordance with the modalities, procedures and guidelines of the enhanced transparency framework under the Paris Agreement, in particular to report annual activity-level data;

(b) *Encourage* climate finance data providers to continue to improve the data and the methodologies necessary for tracking private finance mobilized as well as for measuring and reporting on climate finance results and impacts;

(c) *Encourage* the enhancement of reporting on the qualitative aspects of climate finance, including policies, approaches and other factors related to strong enabling environments and delivering results;

(d) *Encourage* Parties to enhance their tracking and reporting of domestic climate finance flows, including by adopting or following climate-budgeting approaches and climate finance tracking systems, to increase the visibility of resource mobilization within all countries and to inform their implementation of nationally determined contributions and adaptation communications.

53. Recommendations related to the overview of climate finance flows are as follows:

(a) *Encourage* Parties to enhance reporting on domestic and international climate finance in order to address data gaps;

(b) *Encourage* climate finance providers, including multilateral and other financial institutions, relevant non-financial institutions and data providers, when reporting on climate finance, to enhance the availability of granular, country-level data on finance for adaptation and resilience as well as on finance for mitigation in the AFOLU and the water and sanitation sectors;

(c) *Encourage* climate finance and data providers, climate finance recipients and private sector entities to further enhance the tracking of private climate finance, particularly for adaptation, to address data gaps on global climate finance flows;

(d) *Invite* private sector actors and financial institutions to build on the progress made on ways to improve data on climate finance and to engage with the SCF, including through participation in the forums of the SCF, with a view to enhancing the quality of the BA.

54. Recommendations on the assessment of climate finance flows are as follows:

(a) *Encourage* climate finance providers and data aggregators, in keeping with social inclusion and the potential value of information and data from the informal private sector and from local and Indigenous communities, as well as noting the usefulness of proxy data, to incorporate into their systems the tracking of climate finance flows and impacts relating to these stakeholders;

(b) *Encourage* development finance institutions, in particular MDBs, to continue their essential role in helping developing countries to deliver on their nationally determined contributions;

(c) *Encourage* developed country Parties and other

climate finance providers to continue to enhance access and increase climate finance for the LDCs and SIDS;

(d) *Encourage* climate finance providers to continue to enhance access to climate finance by promoting the complementarity and coherence of multilateral climate funds, to enhance country ownership, including through supporting modalities such as direct access entity and national implementing entity accreditation, and to consider policies for improving the balance between support for mitigation and adaptation at the global level, taking into account country-driven approaches, capacities and priorities;

(e) *Encourage* developing country Parties to continue to leverage existing modalities to advance in-country efforts to strengthen institutional capacities for climate change programming and for tracking the impacts of climate finance interventions;

(f) *Encourage* climate finance providers and recipients to enhance their methodologies for measuring and reporting on portfolio-level results in terms of the impacts and outcomes of climate finance and to advance the development of indicators for measuring the outcomes of climate finance interventions;

(g) *Encourage* climate finance providers and recipients, as well as data aggregators, to improve the tracking and granularity of reporting of data on gender-responsive climate finance, as well as to improve the dissemination of best practices in relation to the gender-related aspects of climate finance, gender-related impacts of climate finance interventions and for gender-responsive budgeting

55. Recommendations related to mapping available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof, are as follows:

(a) *Recognize* the importance of making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development and that there is no common interpretation of the scope of Article 2, paragraph 1(c), or the manner of its implementation and encourage Parties to the Paris Agreement to continue constructive engagement on this issue, where relevant, including under the strengthened Sharm el-Sheikh dialogue between Parties, relevant organizations and stakeholders to exchange views on and enhance understanding of the scope of Article 2, paragraph 1(c), of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement referred to in decision 1/CMA.4, paragraph 68, including with regard to the operationalization and implementation of Article 2, paragraph 1(c), with a view to identifying the way forward at CMA 7;

(b) *Encourage* Parties and relevant actors to enhance their reporting on elements they identify as relevant to Article 2, paragraph 1(c), of the Paris Agreement, including on climate adaptation and resilience;

(c) *Encourage* Parties to explore opportunities for, and enhance their understanding of challenges related to, their respective implementation of Article 2, paragraph 1(c), and recognize the importance of knowledge exchange and capacity-building in this regard;

(d) *Encourage* Parties to engage with private sector actors in a nationally determined manner on opportunities for implementing Article 2, paragraph 1(c);

(e) *Encourage* all financial actors to adequately account for the different national pathways in developing countries as it relates to climate action in their interactions with developing country Parties, recognizing that according to the Intergovernmental Panel on Climate Change, effective policy packages would be comprehensive, consistent, balanced across objectives and tailored to national circumstances;

(f) *Request* the SCF, in preparing the seventh BA, to follow up on the recommendations made in this BA and previous BAs;

(g) *Request* the SCF to continue to inform the global stocktake through the preparation of BAs, including its mapping of information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof.

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AF	Adaptation Fund
AFB	Adaptation Fund Board
AFCIA	Adaptation Fund Climate Innovation Accelerator
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
ASEAN	Association of Southeast Asian Nations
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
BTR	biennial transparency report
BUR	biennial update report
CAF	Development Bank of Latin America
CBI	Climate Bonds Initiative
CBIT	Capacity-building Initiative for Transparency
CCCA	Collective Commitment to Climate Action
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CCS	carbon capture and storage
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
CO_2	carbon dioxide
CO_2 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
DGM	Dedicated Grant Mechanism
DNSH	Do-No-Significant-Harm
DTU	Technical University of Denmark
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EDFI	European Development Finance Institutions
EIB	European Investment Bank
EIG	Environmental Integrity Group
EMPEA	Emerging Markets Private Equity Association
ESG	environmental, social and governance
ETF	enhanced transparency framework under the Paris Agreement
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
GEVA	Greenhouse Gas Emissions per Unit of Value Added
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
ICMA	International Capital Market Association
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
IRMF	integrated results management framework
IsDB	Islamic Development Bank
JBIC	Japan Bank for International Cooperation
KfW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)
KPI	key performance indicator
LCOE	levelized cost of electricity
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
MRV	measurement, reporting and verification
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
NDR	report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement
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
OECM	One Earth Climate Model
OOF	other official flows
PACTA	Paris Agreement Capital Transition Assessment
PCAF	Partnership for Carbon Accounting Financials
PFG	Project Formulation Grant
PHEV	plug-in hybrid electric vehicle
PMR	Partnership for Market Readiness
POPs	persistent organic pollutants
PPCR	Pilot Program for Climate Resilience
PPF	Project Preparation Facility
PPIAF	Public – Private Infrastructure Advisory Facility
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)
RPS	Required Policy Scenario
RPSP	Readiness and Preparatory Support Program
S&P	Standard and Poor's
SAP	Simplified Approval Process
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 State(s)
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
TSC	Technical screening criteria
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 sixth BA comprises two products, a summary and recommendations prepared by the SCF, which is included in the annual report to the COP at its twenty-ninth session and to the CMA at its sixth 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 sixth BA was guided by mandates given to the SCF by the COP and the CMA.[2] The sixth 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. The objectives of the sixth BA include the following:

- 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;
- Provide an overview on the financial instruments used, their implications and future trends, and how they assist in enhancing the flows from developed to developing countries, the objectives of the Convention, as well as the long-term goals set out in the Paris Agreement;
- Follow-up on the recommendations made in previous BAs in relation to efforts aimed at improving the methodologies used for measuring, reporting and verifying public and private climate finance flows, overcoming data gaps and improving the effectiveness of climate finance flows;
- Provide an updated mapping of information relevant to Article 2, paragraph 1(c), of the Paris Agreement and its reference to Article 9 thereof[5];
- Follow-up on relevant mandates given to the SCF in the context of the sixth BA particularly on:
  - Improvements in the quality, transparency and granularity of information including in relation to data by region, private finance mobilized from public interventions, and financing arrangements relevant to averting, minimizing and addressing loss and damage;[6]
  - Updating its operational definition of climate finance;[7] and,
  - Including information reported in biennial communications under Article 9, paragraph 5, of the Paris Agreement, as appropriate[8].

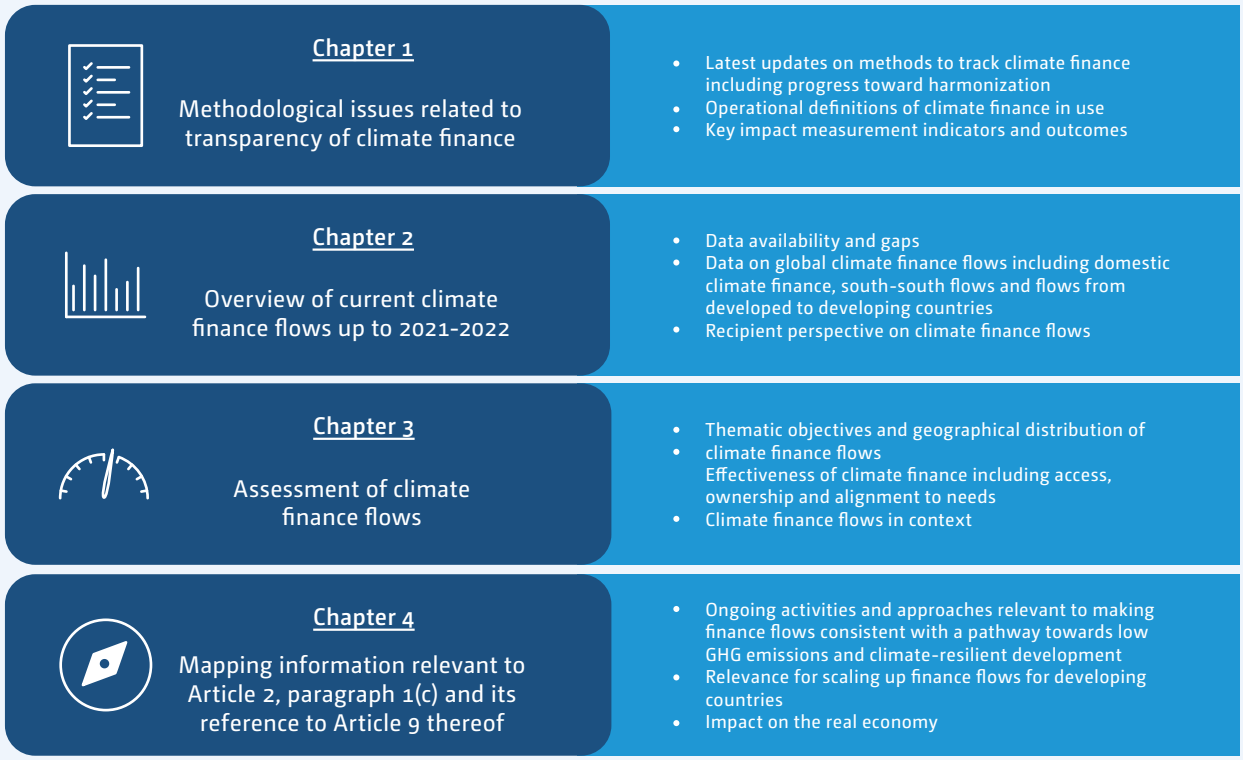
Scope

4. The sixth BA focuses on climate finance flows for 2021 and 2022 and identifies trends from previous years where possible. 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 wide range of reports that explore topics related to climate finance.

1) Available at: https://unfccc.int/topics/climate-finance/resources/biennial-assessment-and-overview-of-climate-finance-flows
2) Decisions 2/CP.17, para. 121(f), 1/CP.18, para. 71, 5/CP.18, para. 11, 3/CP.19, para. 11, 4/CP.24, paras. 4,5,10, 11/CP.25, para. 9, and decision 5/CMA2, para. 9.
3) Article 13, para 6, Article 9, para 7.
4) Decision 18/CMA.1.
5) Decision 4/CP.24, para 10 mandates the SCF to undertake this mapping every four years.
6) Decision 14/CP.27, para. 7.
7) Decision 5/CP.28, para 6.
8) Decision 9.CMA.5, para. 3.

Figure 0.1

Overview of scope and content within each chapter of the biennial assessment and overview of climate finance flows



5. Chapter 1 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 2 provides an updated overview of current climate finance flows over the years 2021 and 2022, 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 3 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 4 maps relevant information on making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development and its relevance to scaling-up finance flows for developing countries.

9. Throughout each chapter, efforts have been made to respond to SCF recommendations in previous BAs as relevant, as shown in Table 0.1.

Table 0.1

Follow up on recommendations from previous biennial assessments and overview of climate finance flows, where relevant

Area of recommendation	Fifth BA recommendation	Relevant section(s)
Country-level reporting: improve reporting at the activity level, taking into account work on definitions of climate finance, and establishing domestic level climate finance tracking systems	Para. 35(a, b, g);	1.3, 1.4, 2.3, 2.5
Data coverage and granularity: improve tracking from all sources including activity and country-level data, private finance mobilized by public interventions, adaptation and resilience, and mitigation in the AFOLU and water and sanitation sectors	Paragraph 35(c, d)	1.3, 2.2, 2.5
Impact and outcomes: enhance measuring and reporting on climate finance results and impacts including at the portfolio level, on local and Indigenous communities, on gender-related aspects of climate finance, as well as qualitative aspects such as policies and approaches related to strong enabling environments, and encourage developing countries to take advantage of availability modalities to strengthen capacities for tracking effectiveness and impacts	Paragraph 36(a, b)	1.5, 3.3
Article 2, paragraph 1(c), of the Paris Agreement: enhance reporting by climate finance providers on elements relevant to Article 2, paragraph 1(c), of the Paris Agreement	Paragraph. 35(e, f, h)	1.6, 2.6, 4.1-4.4
Engagement: private sector associations and financial institutions engage with the SCF including through participation in forums to enhance quality of the BA	Paragraph. 37(e, f, g)	2.2, 3.3
Balance and country ownership: enhance country ownership and improve balance of mitigation and adaptation finance at the global level	Paragraph 35(i)	3.2, 3.3
Access and scale: enhance access by addressing the barriers to issues arising from the complex architecture of multilateral climate funds, increase the scale of climate finance for the LDCs and SIDS and from development finance institutions to expand the availability of climate-related development assistance or investment for NDCs.	Paragraph 36(c)	3.2, 3.3

Approach used in the preparation of the sixth biennial assessment and overview of climate finance flows

10. The sixth BA technical report is the result of meta-analysis including literature, outreach webinars and technical expert meetings as part of the SCF meetings in 2024. A webinar was held on 30 April 2024 on capturing the latest updates on climate finance flows in relation to data, effectiveness and definitions.[9] Valuable inputs have been provided by both Party and non-Party stakeholders in response to the call for evidence issued by the SCF in March 2024.[10]

The term "climate finance" as used in this report

11. As was the case with the previous 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.

12. Since the first (2014) BA, the SCF has used an operational definition of climate finance based on a review of 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,*

9) Information is available at: https://unfccc.int/topics/climate-finance/resources/biennial-assessment-and-overview-of-climate-finance-flows
10) As available at https://unfccc.int/topics/climate-finance/resources/standing-committee-on-finance-info-repository#eq-2

and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts." COP 28 mandated the SCF to consider its operational definition of climate finance in the context of the sixth BA, which is described in chapter 1.2 below.

Work undertaken to improve the quality and coverage of data

13. Additional work was undertaken to improve the quality and coverage of the data and information in each chapter of the BA, with the objective of contributing to the progressive improvement of information on climate finance flows. CMA 1 decided to set the due date for submission of the first BTR under the ETF of the Paris Agreement to no later than 31 December 2024. In the course of preparing the fifth BA, the SCF invited Parties to provide preliminary data on climate finance provided and mobilized as well as received for the years 2021 and 2022. These data are preliminary and subject to change once official BTRs are submitted at the end of 2024.

Approach taken in organizing information and data

14. Climate finance data were aggregated and assessed for the period 2021–2022. 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 GHGs, 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 costs and incremental or component costs are included based on the type of activity and data source used and in general are conservative. Estimates cover public and private finance, and international and domestic finance.
- Climate finance flows from developed to developing countries: The report draws primarily from the reporting of climate funds as well as preliminary data provided by developed country Parties on climate finance provided and mobilized for 2021–2022. 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 developed country 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 developing 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.

15. 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

16. 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 first (2014) BA and to avoid double-counting (see chapter 2.1 for further information). Challenges remain in aggregating and analysing information from diverse sources with varying degrees of transparency.

17. CMA 1 set the deadline for the first BTR under the ETF of the Paris Agreement as 31 December 2024. The first BTRs will include information on climate finance provided and mobilized for the years 2021-2022, in a continuation of the trend of reporting under the Convention that ended with the submission of BR5 on 31 December 2022 with data on climate finance provided in 2019 and 2020. As with the fifth BA, which also was prepared ahead of the reporting deadline, the SCF invited Parties to provide preliminary data on climate finance provided and mobilized and received for 2021-2022 for preparing the sixth BA. These preliminary data are partial and provisional and subject to chance once

official BTRs are submitted by Parties by the end of 2024. Furthermore, the information in BTRs expands the scope of reporting on climate finance provided and mobilized and therefore caution should be exercised in comparing trends across from before 2020 up to 2022.

18. In the area of global climate finance, challenges remain in filling data gaps, particularly on private finance for adaptation activities and for mitigation activities in the AFOLU, the waste and the water and sanitation sectors. Methodologies for calculating climate finance based on total cost or incremental cost produce different estimates by activity. This potentially leads to limitations regarding the completeness of data and any interpretation of the relative shares of global climate finance going to different themes or sectors. Some data sources, such as those for renewable energy, provide activity-level data but may make country- and technology-level assumptions on finance flows to fill data gaps.

19. Regarding domestic climate finance, although more countries are developing climate finance reporting systems, time lags in implementation mean data are underreported for 2021–2022. Amounts in relation to public expenditure may refer to ex ante budget allocations or ex post actual expenditures. Furthermore, the climate relevance of activities reported may refer to weighted criteria per activity or to positive activity lists.

20. Data on international climate finance flows are compiled using various methodologies and have varying interpretations. Flows from developed to developing countries – covering finance provided, mobilized and received – include a mix of data based on disbursements to projects and recipients in the given year or on financial commitments made in the reporting year to activities that may be implemented over several years. Information on South–South cooperation in climate finance flows remains relatively underreported. The classification of data such as by geographical region or by granularity is not uniform across data sources.

1

Methodological issues related to transparency of climate finance

1.1. Introduction

21. This chapter provides an update on ongoing work related to the MRV of climate finance information since the publication of the fifth BA. It responds to a request by the COP for the SCF to take into consideration relevant work by other bodies and entities on the MRV of support and the tracking of climate finance[11] and to consider ways of strengthening methodologies for reporting climate finance.[12]

22. Information on methodologies for the MRV of climate finance is useful in the UNFCCC process, particularly in the context of the implementation of the ETF under the Paris Agreement. This includes work on the operationalization of the common tabular format for the electronic reporting of information on the support provided and mobilized by developed country Parties to developing country Parties and the support needed and received by developing country Parties.[13]

23. Reporting on climate-related finance is undertaken by a variety of 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 2). 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 Creditor Reporting System, or using dedicated methodologies developed by the MDBs and IDFC.

24. 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). The diversity in approaches can compound the difficulty in developing aggregate estimates of volumes of climate finance. It is therefore important to understand the methods used 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 as set out in decision 1/CP.21. In particular, the principles of transparency and consistency referred to in Article 9, 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.

11) Decision 1/CP.18, para. 71.
12) Decision 5/CP.18, para. 11.
13) Decision 5/CMA.3.


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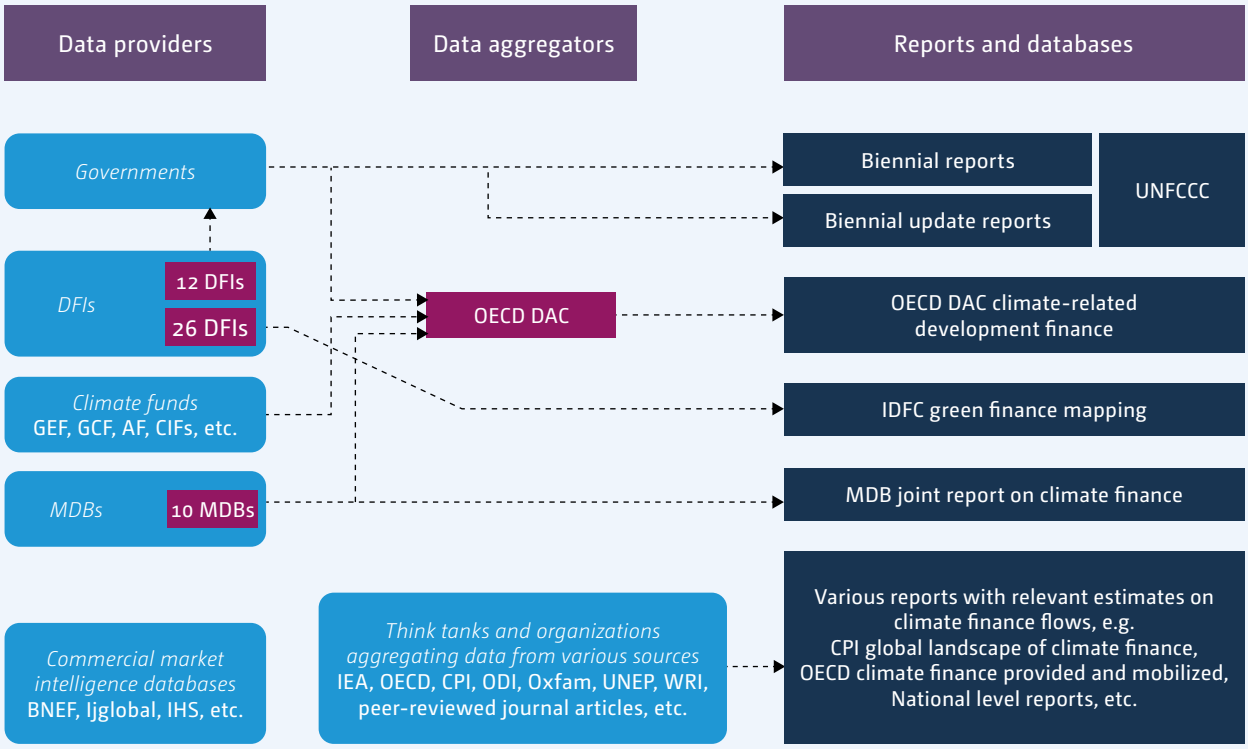
Figure 1.1

Data providers, aggregators and reporters of climate finance



Note: 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.

25. Chapter 1 is structured as follows:

- Section 1.2 provides an overview of the SCF's consideration in updating its operational definition of climate finance;
- Section 1.3 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 1.4 includes updated information on reporting and reviewing climate finance under the Convention and the Paris Agreement;
- Section 1.5 contains information on emerging methodologies for measuring mitigation and adaptation finance outcomes;
- Section 1.6 provides insights into emerging methodologies relevant to tracking consistency with the long-term goal outlines in Article 2, paragraph 1(c), of the Paris Agreement.

1.2. Updating the Standing Committee on Finance operational definition of climate finance

26. COP 28 requested the SCF to consider updating, in the context of the sixth BA, its operational definition of climate finance, building on the information in the SCF's 2023 report on clustering types of climate finance definitions in use.[14] The SCF's operational definition of climate finance was identified through the first BA in 2014. A review of various operational definitions of climate finance in use by data providers and aggregators at that time identified 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."

14) Decision 5/CP.28, para. 6.

27. To guide the technical scope of finance flows to be covered in the BAs, climate finance has in each case been used to refer to "financial resources dedicated to adapting to and mitigating climate change globally, including in the context of financial flows to developing countries." Subsequent BAs (SCF, 2018, 2021b, 2022a) compiled any updates or developments in operational definitions of climate finance in use by various data providers and aggregators but did not alter the operational definition as identified above. Annex B provides the updated compilation of operational definitions in use. Further work on definitions of climate finance, based on the views submitted by Parties and non-Party stakeholders in 2020–2022, was developed by the SCF in the context of the fourth (2021) BA and as dedicated reports in 2022 and 2023.

28. The report on climate finance definitions in 2022[15] provided an overview of definitions in use and found that the understanding of what climate finance encompasses varies, including in terms of which sectors and activities are covered, the range of financial instruments available and which tracking and reporting processes apply, and that there are different perspectives on what definitions of climate finance should include and the detail in which associated concepts should be defined.

29. The 2023 report on clustering types of climate finance definitions in use provides a guidebook-style approach to support Parties in their efforts to report on climate finance. It clusters key elements and decision points for developing and applying a climate finance definition alongside example use cases including reporting under the modalities, procedures and guidelines of the ETF(SCF, 2023b).

30. In 2023, the SCF discussed a potential update to capture developments since the adoption of the Paris Agreement, with some members identifying loss and damage and others identifying the bottom-up, nationally determined nature of climate action, and goals of the Paris Agreement and overall objective of the Convention as potential elements to be reflected. Some members considered that an update was unnecessary. Several Parties referred in their submissions to the SCF operational definition of climate finance still being valid owing to its comprehensive and broad nature with the potential to capture the evolving nature of climate finance over time. In another submission it was suggested that, if an update is needed, it should take into consideration other processes, such as the new collective quantified goal on climate finance, and be consistent with the bottom-up, nationally determined nature of climate action reflected in the approach to the Paris Agreement and in line with the practice of Party-level reporting under the ETF.

31. Bearing these points in mind, the SCF considered the following non-exhaustive list of potential options for its operational definition of climate finance, as appropriate (changes in bold):

(a) No update, thereby confirming the current definition in use: "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";
(b) Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, **increasing adaptive capacity**, and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, **and includes financing for activities that result in measurable action and impact towards achieving the goals of the Paris Agreement and the objective of the Convention**;
(c) (Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, **increasing adaptive capacity,** and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, **and includes financing for actions identified in a country's nationally determined contribution, adaptation communication, national adaptation plan, long-term low-emission development strategy or other national plan for implementing and achieving the goals of the Paris Agreement and the objective of the Convention**

32. In addition, a combination of option b) and c) was proposed at SCF35: Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases, aims at reducing vulnerability, increasing adaptive capacity, and mainstreaming and increasing resilience of human and ecological systems to negative climate impacts, and includes financing for measurable actions for implementing and achieving the goals of the

15) FCCC/CP/2022/8/Add.2–FCCC/PA/CMA/2022/7/Add.2

Paris Agreement and the objective of the Convention, including those identified in a country's nationally determined contribution, adaptation communication, national adaptation plan, long-term low-emission development strategy or other national plan

33. The SCF agreed to apply option (c) in its future work in BAs.

1.3. Updates and trends in methodologies to track climate finance

34. The following section provides updates to methodologies, including the scope and coverage, on climate finance tracking as covered in previous BAs. For more detailed descriptions of each methodology, please refer to previous BAs.

1.3.1. Methods to track international public climate finance

Development Assistance Committee of the Organisation for Economic Co-operation and Development climate-related development finance database

35. The OECD DAC climate-related development finance database includes bilateral flows from governments, 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 DAC statistical system.

36. The DAC statistical system allows for climate-related development finance to be considered from two perspectives. A 'recipient perspective' captures development finance to developing countries that are eligible for ODA, from both bilateral and multilateral providers.[16] The 'provider perspective' is a measure of bilateral providers' efforts, comprising their bilateral contributions and their contributions to international organizations. Under the provider perspective, data includes 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'.[17]

37. The Rio markers methodology is used by DAC members, bilateral contributors and a number of institutions 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.[18] In recent years, both the Rio marker definitions for climate change mitigation and adaptation have been amended to include references to the Paris Agreement (see annex B and the fifth BA for more information). Since the fifth BA, the DAC agreed an update to the indicative tables for reporting activities with the Rio markers on climate change adaptation and mitigation, and now provide separate coefficients for mitigation and adaptation finance for calculating their imputed share of their core contributions to international organization.

38. When reporting to the UNFCCC on climate finance in their BRs, most 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. In 2018, the OECD DAC secretariat introduced a biennial voluntary survey to collect information from DAC members on their approach to adjusting amounts reported to the UNFCCC.

Multilateral development banks' climate finance tracking methodologies

39. Since 2011, six MDBs have jointly reported their mitigation and adaptation finance activities.[19] In 2018, the IsDB joined the group in reporting climate finance flows and in 2020, the AIIB joined. In 2021 and 2023 respectively, the NDB and the Council of Europe Development Bank were featured for the first time in the Joint Report on Multilateral Development Banks' Climate Finance.

40. The MDBs and IDFC agreed common principles for climate change mitigation and adaptation finance tracking in 2015 (AfDB et al., 2015; ADB et al., 2015). The joint MDB climate finance Working Group on Climate Finance Tracking developed the methodology for the report and updated the methodology over time. The adaptation finance methodology captures the incremental cost while mitigation finance captures

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

17) 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.

18) OECD developed a handbook and guidance table that are available at http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm.

19) These MDBs included AfDB, ADB, EBRD, EIB, IDBG.

financing based on an exhaustive list of activities in sectors and sub-sectors that reduce greenhouse gas (GHG) emissions in line with the goals of the Paris Agreement and that are compatible with low-emission development.

41. MDBs and IDFC published a revised version of their Common Principles for Climate Mitigation Finance Tracking in December 2023 (ADB et al., 2023). The list of eligible mitigation activities, and respective screening criteria and assessment guidance is based on the comprehensive update of 2021, which all MDBs applied to report their 2022 climate change mitigation finance. The 2021 update aligned the climate finance tracking methodology and eligible mitigation activities with the long-term temperature goal of the Paris Agreement. Two main changes were the inclusion of new activities required in order to achieve the goals of the Paris Agreement, and ensuring the avoidance of activities that, despite reducing GHG emissions in the short term, risk locking in emissive technologies over time. It also introduced the concept of transitional activities, which, while being GHG-intensive, contribute to the transition towards a climate-neutral economy (e.g. energy efficiency improvements and emission reductions in the energy and industrial sectors). Transitional activities, among others, must not have technologically or economically feasible low-emissions alternatives and must not lead to a lock-in of emission-intensive assets inconsistent with the long-term goal of net-zero GHG emissions.

42. The 2023 revision marks the end of a two year interim period of differing approaches between MDBs, which had considered the list to be an exhaustive list, and IDFC members that applied the list as a guideline. From 2024 onwards, all MDB and IDFC members will use the Common Principles as an exhaustive list for tracking and reporting climate change mitigation finance. The list is to be updated regularly with a comprehensive review of the methodology foreseen in 2026. The document states that, as technology developments for deep decarbonization will be taken into account, 'the current list includes some activities that may not be eligible in the future as the transition to an economy with net-zero GHG emissions progresses'.

43. The updated joint methodology for tracking climate change adaptation finance was published in 2022 and will apply for adaptation finance reported by MDBs for 2023 onwards (ADB et al., 2022). As in the previous version, the methodology follows a process-based approach according to three steps of 1) setting out the context of vulnerability to climate change, 2) identification of an explicit intent to reduce vulnerabilities, and 3) demonstrating a clear link between specific project activities and climate change vulnerabilities identified in step 1. Key changes to the methodology are the introduction of a third type of adaptation activity in addition to adapted and enabling activities, which are activities with shared adaptation and development objectives. Adaptation activities are hence considered in a wider range of sectors, such as education, health, or social protection and financial services. For adapted activities and activities with shared adaptation and development goals, typically less than 100 per cent of MDB finance is accounted for as adaptation finance, while for activities enabling adaptation, typically 100 per cent of MDB finance is accounted for as adaptation finance. Further, MDBs note that financing instruments for adaptation have broadened, and can include also policy-based loans, working capital or credit lines. Lastly, the adaptation finance methodology also provides input to the MDBs' separate work on assessing the Paris alignment of their operations, in particular for ensuring these are resilient to climate impacts and for estimating the finance associated with aligned projects.

44. The joint MDB group reports climate finance in commitments from the MDB's own accounts as well as from external sources channelled through, and managed by, the banks, and on climate co-financing by non-MDB actors.[20] As financial commitments are captured at the time of board approval or financial agreement signature, the data are therefore based on ex-ante estimations and no revisions are issued when changes in the project either increase or decrease climate financing. Financial instruments covered include advisory services, equity, bonds, grants, guarantees, investment loans, lines of credit and policy-based or results-based financing.

45. The joint MDB report on climate finance includes aggregate information across instruments, sectors, regions and at the country level for the years since 2015. Since 2020, the joint report has expanded its geographical coverage to include climate finance commitments in all economies in which the MDBs operate including high-income countries, with comparability on new data against previous reports provided in an annex. Only four of the MDBs publish project-level activity data on their own websites that are compiled in the joint report. These include Asian

20) External resources include trust-funded operations, such as those funded by bilateral agencies and dedicated climate finance funds such as the Climate Investment Funds (CIF), Green Climate Fund (GCF), and climate-related funds under the Global Environment Facility (GEF), EU blending facilities and others (MDB 2021).

Development Bank, Inter-American Development Bank, Islamic Development Bank; the World Bank for its concessional finance arm IDA, and the IBRD; and EBRD in its sustainability report. All of the MDBs also publish activity data through the OECD DAC system, although some MDBs with private sector operations consider these climate finance commitments as confidential activity level and report at aggregate levels.

International Development Finance Club green finance mapping

46. IDFC reports green finance flows from 26 national, regional and bilateral DFIs based in both developed and developing countries. Green finance is broken down into climate finance as mitigation, adaptation and cross-cutting. Mitigation financial flows describe investments in projects and programmes that contribute to reducing or avoiding GHG emissions, and adaptation financial flows refer to investments that contribute to reducing the vulnerability of goods and persons to the effects of climate change. Since its 2021 report, the two other categories of green finance comprise finance with other environmental objectives (IDFC, 2023b).

47. The IDFC green finance mapping report contains institutional level finance commitments by type of theme and aggregate level flows by sector, sub-sectoral technologies, financial 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, loans (concessional, non-concessional and unattributed) and, grants, and other instruments comprising guarantees and equity used by financial institutions to finance investments (IDFC, 2023b)

48. In line with the MDB-IDFC Common Principles for Climate Mitigation Finance Tracking, a consistent categorization of mitigation and adaptation activities was agreed to by IDFC members. As noted in paragraph 41 above, IDFC members will apply the joint MDB/IDFC mitigation finance methodology as an exhaustive list for tracking mitigation-related finance from 2024 onward. For adaptation finance flows until 2022, the IDFC green finance mapping continues to apply the 2015 MDB-IDFC Common Principles for Climate Change Adaptation Finance.

49. Not all IDFC members participate in the survey owing to insufficient reporting systems, a lack of resources dedicated to collecting data, non-availability of data and confidentiality issues. This can lead to incomplete or inconsistent data collection over years as the number of reporters varies and not all members have the capacity to report across all sectors and activities (e.g. in adaptation finance). For flows in 2022, 22 members reported and for flows in 2021, 20 members reported. (IDFC, 2023b).

Multilateral climate funds

50. Multilateral climate funds, such as the GCF, GEF and AF, publish project-level activity data on their respective websites. CFU is an independent website maintained by the Heinrich Böll Foundation and ODI that offers annually standardized and aggregated project-level information from 23 multilateral climate funds, including information on pledges, approved commitments and disbursed funds (CFU, 2023). In addition, the GCF, GEF, AF and CIFs report on activity-level data to the OECD DAC system.

Total Official Support for Sustainable Development platform

51. The objective of the TOSSD statistical framework is to fill a data gaps about resources for sustainable development beyond ODA, including capturing a broader array of actors, from traditional bilateral and multilateral reporters to emerging providers and private finance actors, as well as instruments, such as guarantees. The number of data providers to the TOSSD platform expanded from 99 as reported in the fifth BA to 119 providers including DFIs and governments of developing countries (TOSSD, 2024). 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 and global and regional expenditures for international public goods, such as activities that promote international cooperation, knowledge generation and dissemination, and expenditure in provider countries that address global challenges. It also includes private finance mobilized by official interventions. TOSSD data for 2021 captured USD 85 billion of official support for sustainable development not captured in other databases and twice the number of South-South co-operation activities in comparison with 2020 data.[21]

21) https://tossd.org/pilot-studies-data-stories/tossd-2021-data.htm

Other sources

52. Other sources on international public finance include new databases analysing South-South finance flows, particularly in the energy and infrastructure sectors. WRI's COFI database covers debt and equity investments from financial institutions based in China in the power generation sector in 82 countries related to the Belt and Road Initiative. It consolidates nine different source databases to include transaction details by power plant.

1.3.2. Methods to track private climate finance

Methods for estimating private finance mobilized by public interventions

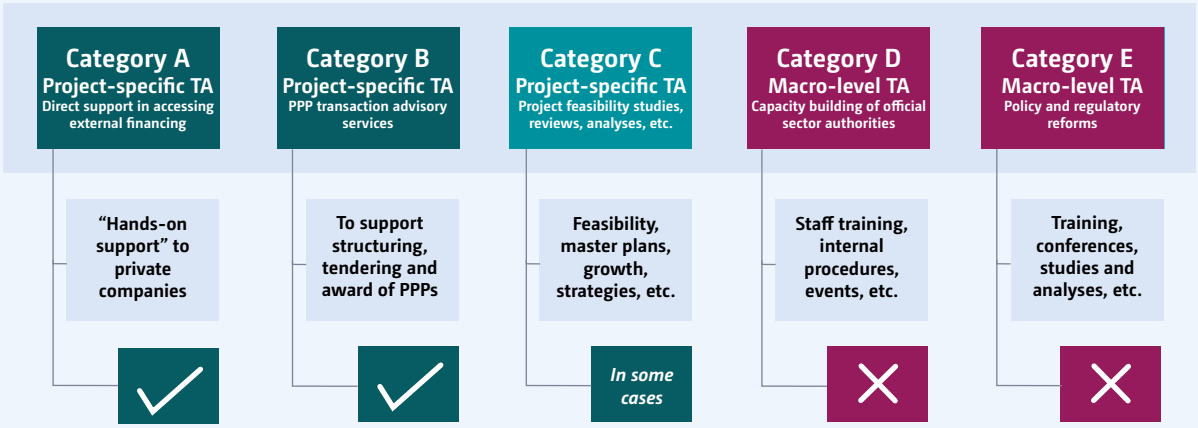
53. The OECD DAC statistical system collects data on amounts mobilized from the private sector following an instrument-specific approach for seven financial instruments or leveraging mechanisms, namely: syndicated loans, developmental guarantees, shares in collective investment vehicles, direct investment in companies, credit lines, simple co-financing and project finance schemes.

54. Each methodology is designed based on key principles to standardize assumptions and approaches used for measuring mobilized finance. These include the need for a clear causal link demonstrated between the intervention of an official actor and the private investment where distinctions are made between activities upstream or downstream in the project development stage, the need to avoid double-counting in cases where more than one official actor (including local official financiers) participate in a single project (the amount that each official investor can claim to have mobilized should ideally reflect the degree of involvement and level risk taken to unlock the private investment), and the identification of standard points of measurement for each methodology. They data captured covers all private finance mobilized by official development finance interventions regardless of the origin of the private funds.

55. In 2024, the OECD DAC added guidance for reporting on mobilization through technical assistance activities, such as capacity-building provided by local or international specialists in the form of sharing information and expertise, instruction, skills training, transmission of working knowledge and advisory services[22]. Only activities with a direct and tangible private finance mobilization effect can be included in the measure on the amounts mobilized from the private sector as shown in Figure . Evidence of active and direct involvement may include mandate letters, fees linked to financial commitments or other evidence (e.g. project documentation) of a provider's active and direct role leading to the commitment of private financiers.

Figure 1.2

Overview of eligible activities for reporting on private finance mobilized through technical assistance activities



22) DCD/DAC/STAT(2024), available at https://one.oecd.org/document/DCD/DAC/STAT(2024)12/en/pdf/.

56. Such activities typically consist of direct technical support to projects/transactions on accessing private finance such as hands-on support to companies/entities with the aim of helping them to prepare bankable business plans and linking these up with investors, broader public-private partnership transaction advisory services. Feasibility studies or other support to help develop and implement projects can also be included in the measure if a direct causal link with the subsequent private investments can be established. Examples of technical assistance activities excluded from the methodology include field visits, networking support and analyses to prepare projects, and capacity-building for official sector authorities or support to policy and regulatory reforms. These measures are considered as having a catalytic effect.

57. Since 2015, MDBs have reported on climate co-financing to estimate the volume of financing by both public and private external parties alongside MDB climate finance. This report differentiates between private direct mobilization, composed of financing from a private entity on commercial terms due to the active and direct involvement of an MDB leading to commitment, and private indirect mobilization, composed of 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. The 2018 BA provides a detailed discussion and 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 (SCF, 2018).[23]

Other methods for estimating private climate finance

58. As outlined in the fourth (2020) BA, commercial and market intelligence databases inform the collection of private climate finance data in specific sectors such as renewable energy finance, energy efficiency and EVs in particular. BNEF project-level data on renewable energy projects continues to be a primary source of data for aggregators of climate finance flows including CPI's global landscape of climate finance. IEA continues to derive incremental investments related to energy efficiency in the buildings, transport and industry sectors from proprietary databases, based on applying baseline calculations of costs of equipment at minimum energy performance standards or sector averages. For EVs, IEA catalogues country-level retail prices of EV models and applies them to annual sales data by country to estimate total investment. Public incentives or taxes are used to denote the share of investment from government and the remaining share from consumers. For electric charging infrastructure, IEA tracks installation levels and applies unit cost data for estimating total investments. IEA data on EVs and charging infrastructure are used in CPI's global landscape of climate finance. Other market intelligence databases of relevance include data provided by IJGlobal, IHS Markit and others that provide project-level data on infrastructure investment. These data are used in CPI's report to cover water, waste, municipal and transportation infrastructure projects where the climate relevance of the activity is clear.

59. In the green bonds market, a significant number of data providers track global green bond issuances and other thematic debt instruments such as sustainability-linked bonds, SDG bonds, transition bonds, blue bonds and social impact bonds. CBI publishes regular publicly available data on labelled bonds and reports on the market size of climate-aligned bonds (both labelled and unlabelled bonds). In its global landscape of climate finance report, CPI uses green bond data from CBI to screen for new projects that are linked to green bonds but were not captured in other datasets.

1.3.3. Methods to track climate finance at country level

Overview of countries regularly reporting climate finance expenditures and private finance, scope and approaches

60. Climate finance tracking and reporting may be used to inform policy decisions for scaling up domestic and international resource mobilization to meet national climate change objectives. In recent years, there has been significant growth in methodologies developed for country-level reporting on climate finance. Government agencies international organizations or other non-State actors conduct one-off studies (e.g. CPEIRs or domestic climate finance landscapes) or regular reporting based on established budget tagging and tracking systems. In this context, tagging refers to defining and introducing climate-specific categories or tags to public expenditures, while tracking describes the application of the tags to monitor the climate-relevant

23) See in particular section 1.4 and Annex D: Compilation of information on methods for estimating and tracking climate-related private finance.

expenditure. Italy introduced green budgeting in 2009 and early experiences with tracking domestic climate-relevant spending in developing countries was advanced through CPEIRs from 2012 onward. Such one-off reviews in collaboration with government ministries helped to build capacity and supported the formal integration of green budgeting into public financial management frameworks. Since 2018, at least 16 jurisdictions have introduced domestic climate budget tagging or reporting systems, and at least 17 jurisdictions have indicated the development of such methodologies since 2021.

61. In 2024, the total number of jurisdictions with regular tracking systems in place is about 32, while at least another 23 countries are in the process of developing climate budget tagging or tracking systems. This is five jurisdictions more than reported in the fifth (2022) BA. Domestic climate budgeting systems can be found in all world regions, with seven systems existing or under development in Africa, ten in Asia and three in the Oceania region, 22 in Europe, 12 in Latin America and the Caribbean, and one in North America. Furthermore, a range of Pacific Island States have, since the early 2010s conducted one-off assessments under the CPEIRs or Pacific Climate Change Finance Assessment frameworks, including Kiribati, the Marshall Islands, Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands, Tonga and Vanuatu. In addition, some countries that do not implement an integrated green or climate budget tracking system focus their efforts on climate and environmental impact assessments of public budgets and expenditures, for example Denmark, Norway, and Switzerland.

62. Government-led tracking initiatives, focus almost exclusively on public climate expenditure in national budgets, while a few systems such as Colombia's also provide estimates on private climate finance. The aims of climate finance tracking of public expenditures vary from the monitoring implementation of national climate policy plans, to identifying financing gaps in order to attract international climate finance or to identify eligible green expenditures to link to the issuance of sovereign green bonds. Among existing tracking systems, about half of the jurisdictions (13) have systems designed to tag climate-relevant spending during the ex-ante stage of budget allocation, and the other half is designed for either both budget allocation and ex-post expenditure tracking (11), or exclusively for spending reviews (3).

63. Methods to account for and report public climate expenditures differ depending on the national circumstances. Of the 32 identified tracking systems, eight countries use binary or full-costing approaches, and another four systems apply cost component approaches by identifying sub-activities within programmes or budget lines. While two systems apply mixed approaches, eight other systems apply different relevance or weighting schemes for their accounting of climate-relevant finance, which are often based on the CPEIR methodology and informed by the Rio markers approach, and two countries use a mix of relevance and cost-component accounting. In CPEIR based systems, relevant budget lines, programmes or components are tagged as having no, low, medium or high relevance to climate mitigation or adaptation outcomes. Systems that make use of OECD Rio markers identify activities according to principal, or significant mitigation or adaptation climate objectives, and in total, at least nine of the existing systems have adopted characteristics of the Rio markers for their identification of climate-relevant activities. The accounting and reporting practices of identified climate-relevant expenditure reporting programmes can differ thereafter: some systems report budgets against these high, medium or low markers (Ethiopia, Nepal) or apply discount weighting of budget lines with different granularities and weighting methods (Bangladesh, Cambodia Ghana, Honduras, Italy, Pakistan), for example 100 per cent for highly relevant budget lines, 50 per cent for those with medium relevance and 25 or 20 per cent for those with low relevance in the case of Cambodia or Ghana. In reporting against its objectives to spend at least 30 per cent of the 2021-2027 EU budget on climate change, the EU has added a do no significant harm principle and an exclusion list of projects that cannot be financed, to its traditional weighting approach based on the Rio markers. Each policy area and measures in the budget and recovery plans are designated as contributing fully, partly or with no impact to the climate objective with the amount weighted 100, 40 and 0 per cent, accordingly.

64. The incorporation of climate-relevant activities covered in government-led tracking systems in use or one-off studies cover a broad range of sectors and themes, including the common themes of climate change mitigation and adaptation. Four systems track separately the objective or theme of disaster risk management, disaster risk finance, or loss and damages (Chile, Honduras, Kiribati, Nicaragua), while many other countries incorporate climate-related disaster risk management activities in sectors or sub-sectors without explicitly specifying it as an overarching climate objective or theme (e.g. Bangladesh, EU, Indonesia, Philippines and Nepal). A recent study for the United Nations Office for Disaster Risk Reduction found that up to 40

countries have experience with the identification of public expenditures related to disaster risk reduction and adaptation, either through regular tagging systems or one-off policy and expenditure reviews (Choi et al., 2023). Many countries also consider broader environmental goals alongside climate objectives in their tracking efforts, such as biodiversity, sustainable water use, circular economy or pollution prevention and control.

65. Climate budget tagging and tracking systems reflect local and context specific exposure to climate change and nationally defined climate change policy priorities. The fifth (2022) BA provided a detailed review on activities commonly considered as climate-positive, including renewable energies, sustainable agriculture, industry or transport. Further climate-relevant activities are tagged in the water and wastewater sector, as well as a broad range of activities related to climate change disaster risk reduction and management, migration and resilient health systems

66. International climate finance flows are a regular component of domestic green budget tagging systems. At least 12 jurisdictions with existing tracking systems include international climate finance in their methodology to report on budget or expenditure allocations. Three countries (Bangladesh, Ghana and Honduras) only capture climate finance channelled through the national treasury, but do not report the amounts separately. Countries report from the recipient perspective on international climate finance as budgeted or spent, such as in the Colombian domestic climate finance MRV portal, but also from the provider perspective on climate finance and other climate-relevant development spending, as is the case for the EU, France and Ireland.

67. Harmful or climate-negative expenditures are rarely incorporated in domestic tracking systems. France and Ireland are the two countries that have integrated categories for environmentally harmful expenditures or support into their regular tracking frameworks. For the first time in its 2024 budget estimations, Ireland identified climate and environmentally unfavourable expenditures defined as “any expenditure which impedes, in whole or in part and whether directly or indirectly, Ireland’s transition to a low carbon, climate-resilient and environmentally sustainable economy, where it is evident that all, or at least the majority of expenditure on the programme in question, would likely contribute to a deterioration or disimprovement in climate and environmental outcomes”.[24] In addition, Italy, Finland and Norway regularly assess the positive or negative impact of public subsidies on climate or the environment outside of regular budget tracking exercises(Choi et al., 2023).

68. The public reporting of climate-relevant budgets and expenditures differs greatly among countries in terms of accessibility, level of information provided, and the format of publication used. Some jurisdictions present publicly available information on online portals (e.g. Colombia, Ecuador, EU, Philippines), and most other countries do report climate-relevant spending as part of the annual budget formation or review. Differences exist, however, with regard to whether the climate-relevant allocations are presented in the general budget (e.g. Nicaragua), are annexed (e.g. France, Ireland, Italy, Mexico) or are presented through separate reports (e.g. Honduras). Separate reporting can also take the form of dedicated citizen, climate or SDG budgets, which is the case for Bangladesh, Cambodia, Ghana and Nepal.

69. The diversity of reporting formats of domestic tracking systems continues to pose a challenge to the global assessment of domestic climate-relevant spending. Annex F provides an overview of retrievable information on domestic climate-relevant spending globally, with information from CPEIRs or domestic budgeting systems of 20 countries, as compared with 32 jurisdictions identified above that indicate the existence of national tracking systems. At present, most publicly available information concerns the ex-ante stage of budget allocation, with less available information of actual climate-relevant expenditures. While tagging at the budget allocation stage provides a valuable indication of the climate-relevance of domestic spending, real-world discrepancies between budget formation and spending execution can lead to uncertainties around the climate outcomes of domestic spending. Limited progress in the readiness of G20 economies and participating countries in closing these data gaps and enhancing the transparency of climate-related expenditures for governmental current and capital expenditures was also reported in the progress report on the third phase of the G20 Data Gaps Initiative (IMF, 2023c) .

70. Since green budgeting at the country-level is an evolving practice, there is little available evidence so far on the impact of green budgeting practices

24) Available at https://www.gov.ie/ga/foilsiuchan/b2258-climate-and-environmental-expenditure-in-rev-2024/

for promoting climate mitigation and adaptation objectives through more sustainable resource allocation (UNDRR, 2023). EU member States, for example, have mostly used green budget tagging as a transparency mechanism, rather than to proactively inform budget allocations (Pojar, 2023). Countries are in the processes of developing methodologies and measurement frameworks, such as performance budgeting to link climate objectives to incentive systems for ministries; however, climate performance and impact can often be measured only with a time lag of several years (OECD, 2021, 2024c).

71. Sector specific climate vulnerability assessment has been introduced as an additional component to the CPEIR methodology in some CPEIR national studies. The identification of sector specific climate vulnerabilities will aid the process of adequate policy formulation and thereby provides inputs to the assessment of financing needs. In Timor Leste's CPEIR report, 16 key sectors are identified in accordance with its National Strategic Plan. The climate vulnerability assessment, based on a review of available qualitative and quantitative literature, provided evidence on the potential climate change impact and exposure of different sectors, and enabled them to issue specific recommendations to strengthen climate responses and policies, including knowledge production on climate vulnerabilities, at both the sector and national level.

Development of national green/sustainable finance taxonomies

72. Activity lists on climate mitigation or adaptation, such as the MDB-IDFC Common Principles for Climate Mitigation Finance Tracking, have served in part to inform green or climate-aligned taxonomies in recent years to support the development of the green bond market. Such systems rarely incorporate a stand-alone definition of climate finance but do adopt activity lists on climate mitigation and/or adaptation.

73. The development of green and sustainable finance taxonomies and eligibility lists has proliferated globally in recent years, with currently 23 taxonomies in place or published in 21 different jurisdictions and another 39 taxonomies being developed or under consideration. The large majority (18) of existing taxonomies have been published since 2020, with only two taxonomies or eligibility lists published before the Paris Agreement was signed in 2015, both from non-Party stakeholders MDBs and CBI. Countries that have taxonomies in place have a wide variety of economic and financial market contexts, covering high-income jurisdictions such as the EU member States, Japan, Republic Korea or Singapore, lower- and upper-middle income countries with a large or medium economic market size and the LDCs and SIDS such as Sri Lanka and Papua New Guinea. The geographical distribution of national or regional taxonomies shows wide coverage in Asia (particularly South, South-East and East Asia) and Europe, and a notable number of ongoing taxonomy development in Latin American and Caribbean countries, with African countries catching up since 2023:

- Africa: 2 existing, 5 under development/ consideration;
- Asia: 14 existing, 15 under development/ consideration;
- Europe: 2 existing (including the 27 member States of the EU), 1 under development/consideration;
- Latin America and Caribbean: 2 existing, 13 under development/consideration;
- North America: 0 existing, 1 under development/ consideration;
- Oceania: 1 existing, 3 under development;
- Global scope: 2 existing, 1 under development.

74. Key aspects and commonalities of taxonomy design are presented in table 1.1. The focus of green and sustainable taxonomies so far has been on identifying relevant activities and assessment criteria for the climate change mitigation objective. All taxonomies cover mitigation relevant activities and 12 taxonomies have included the climate change adaptation objective or have included activities that can be considered adaptation-relevant while not specifying the adaptation objective explicitly. Of the 10 taxonomies that currently do not have adaptation in scope, five intend to develop a list of eligible activities or assessment criteria in the future. It is notable, however that 15 of the assessed taxonomies entail components of disaster risk reduction and management or loss and damage, either under the adaptation theme, or through dedicated sub-sectors or individual activities that are clearly related to disaster risk reduction & management. The do no significant harm principle to other environmental objectives, which was first introduced in the EU taxonomy, has become another common design feature among taxonomies. The assessment of this principle is often based on national, regional or global resilience and biodiversity standards or codes and forms the evaluation baseline for ensuring that eligible mitigation activities are at a minimum adapted to climate change and do no harm to other environmental objectives.

Table 1.1

Design features of 21 existing green and sustainable finance taxonomies

Includes	Yes	No	Unspecified	Other
Adaptation objective or activities	12	10 of which 6 for future development	–	–
Loss and damage L&D or disaster risk reduction and management components	15	7	1	–
Transition component	14	8		1 (unknown)
Just Transition references	13	7	1	2 (limited, inclusion of minimum safeguards)
National context considered in design	22	–	–	1 (not applicable – CBI)
In line with Paris Agreement or 1.5C target	19	–	4	–
Science-based design	20	–	2	1 (unknown)
Do no significant harm principle	17	5	–	1 (unknown)

Source: analysis by the technical authors, based on primary methodology documents.

75. The integration of transition approaches that allow consideration of activities that are not yet green but reduce GHG emissions or will be required in the low carbon transition is present in the majority (14) of taxonomies. Two of the most common ways to integrate transition considerations are taxonomies that establish differential performance thresholds or so-called traffic light systems of green, transition (amber) and non-eligible or red (i.e. harmful/excluded) activities – (e.g. Singapore, ASEAN, Indonesia, Thailand) or taxonomies that include specified screening criteria and thresholds for transitional activities in hard-to-abate sectors for which there is currently no technologically or economically feasible low-carbon alternatives but that support the transition on a credible pathway consistent with the 1.5 °C temperature goal (e.g. Colombia, EU, MDB/IDFC and South Africa methodologies). Identifiable components or references to foster just transitions are noted in 13 of the 23 taxonomies, with another two lists referencing human rights and labour standards as minimum safeguards for any eligible activity.

76. All taxonomies by Parties to the UNFCCC (21) as well as the MDB/IDFC taxonomy refer to the consideration of the national socio-economic context or circumstances in taxonomy development, including the selection of relevant sectors and activities, and in defining the assessment criteria for green or sustainable activities. Most often, the alignment with national climate change objectives and pathways in NDCs, NAPs and other climate policies and plans, as well as with domestic sustainable development priorities is noted. A large majority of green and sustainable finance taxonomies (19) also note that taxonomy development and its ambition levels is supporting the achievement of and in line with the Paris Agreement, including its temperature goal. In this context, 20 taxonomies entail explicit statements on science-based design, including the consideration and adoption of international best practices, while being tailored to the specific economic composition or local circumstances. The assessment of a clear climate policy link is also shared in the available literature, where a comparative study of 26 taxonomy frameworks finds that "...there is a well-defined connection or reference established to the Paris Agreement, the SDGs, and the country's national climate and energy policies", and that some taxonomies include further contextual factors, such as Islamic finance, for example Malaysia (Marchewitz et al., 2024).

77. While the overarching design principles of national taxonomies have converged over time, four different approaches exist in how eligible activities are selected and how criteria are set. Overlap between approaches is evident, and the methodologies can be used independently or in combination. For example, a taxonomy based on a technical screen criteria-based approach with single-set thresholds could include a white-list for some activities, or could contain guiding principles:

- **White-list-based** approaches focus on identifying eligible projects or economic activities under each sector or sub-sector. Instead of following a technology-neutral approach, this type of classification lists technologies that are considered

green or sustainable and provides detailed descriptions of eligibility. The whitelist-based taxonomies do not always start by screening whole economic activities but seek to identify activities that are already green or contain green components that could bring more positive impacts to the environment. The whitelist approach could contain technical screening standards for certain activities and projects to define eligibility. This approach was applied to the taxonomies developed by Bangladesh, China and Mongolia.

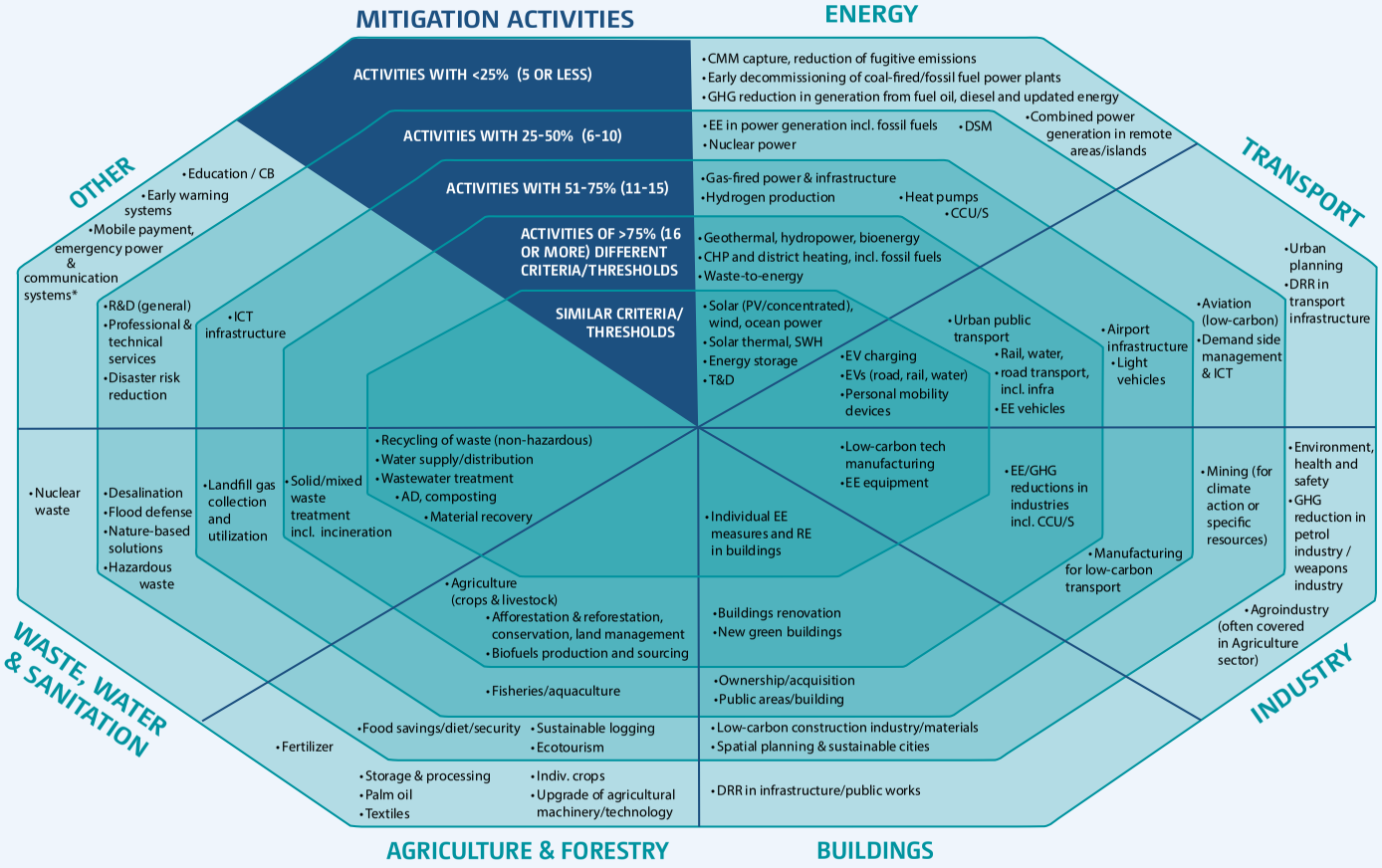
- **Single-set technical screening criteria based** approaches: a single set of TSC, including specified parameters and performance thresholds for economic activities to comply with and make a substantial contribution to environmental objectives. For example the metric of g/CO2 eq is commonly used to assess compliance of an activity with the mitigation objective. As a result of the single-set approach to setting TSC, these taxonomies only identify green activities that pass a certain threshold. Twelve existing taxonomies, including among others, those of the EU, South Africa, Colombia, Kenya, Republic of Korea and Mexico, have adopted the single-set TSC approach The Colombian taxonomy, in addition to being a threshold-based TSC, adopts a catalogue of differential practices (basic, intermediate, advanced) to incentivize sustainable activities for its transversal land-use sector including agriculture and forestry.
- **Differential threshold or traffic-light** approaches: four recent existing taxonomies, ASEAN, Indonesia, Singapore and Thailand, as well as the taxonomy under consultation in Nepal, define differential thresholds or requirements for economic activities, depending on their starting points or efficiencies. This approach results in a so-called traffic light system of green (consistent with an environmental objective), amber (transition or do-no-harm) and ineligible (red or harmful) activities. The differential threshold approach is designed to broaden inclusivity of sustainable finance by recognizing that different sectors, especially in hard-to-abate industries and transport, but also different regions and countries will have to transition according to different pathways. The recently adopted Singapore Taxonomy includes in its transition category activities that are not presently on the 1.5 °C pathway, but are either moving towards a green transition pathway within a defined time frame or are facilitating significant emissions reductions in the short term with a prescribed sunset date (MAS, 2023). Further differences exist between the taxonomies regarding the treatment of new and existing assets, prescription of sunset or phase-out dates, and whether or how progress in the transition effort of the activities is demonstrated.
- **Principle-based** approaches define a set of core principles for market participants. This approach is in use by taxonomies developed by Malaysia and Japan. The method is similar to the Green Bond Principles published by ICMA. Bank Negara Malaysia uses a principles-based taxonomy for climate change mitigation and adaptation. It contains core guiding principles to assess which economic activities can be funded and includes a non-exhaustive list of examples, thereby adding a white-list component. The Indonesia taxonomy employs, for micro, small and medium enterprise specifically, a sector-agnostic decision tree screening methodology, which is similar to a principle-based approach in relying on qualitative assessment criteria rather than requesting a more data-intensive TSC compliance approach.

78. Following from differing methodologies for taxonomy development, jurisdictions differ in the classification of eligible sectors and activities. To screen and select sectors and activities, jurisdictions draw from varying classification systems. The EU taxonomy applies the industrial classification system of economic activities (Statistical Classification of Economic Activities in the European Community), while ASEAN identifies sectors in scope based on the International Standard Industrial Classification of All Economic Activities owing to its commonality with the regionally applicable ASEAN Member States National Standard Industrial Classification codes. Other countries define sectors and activities based on national priorities or draw from sector or activity lists as contained in national climate policy plans, such as is the case in Bangladesh, Colombia and Mongolia.

79. The breadth of taxonomies in use or where draft methodologies have been published allows for a comparison of existing operational definitions of climate finance. An overview of taxonomies that explicitly mention climate change mitigation is provided in the figure 1.3 below that presents a mapping of activities according to the frequency across 21 reviewed classification systems.

Figure 1.3

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



Sources: AfDB et al, 2023; ASEAN, 2023; Bangladesh Bank, 2020; Bank Negara, 2021; Bank of Papua New Guinea, 2023, Bank of Thailand 2023; CBI 2021; Central Bank of Kenya, 2024; Central Bank of Sri Lanka. 2022; EU COM, 2021; Financial Stability Commission of Mongolia. 2021; Gobierno de Colombia, 2022; Gobierno de Mexico, 2023; Government of Republic of Korea, 2022; Government of the Republic of Kazakhstan, 2021, Government of the Russian Federation, 2021, National Bank of Georgia, 2022, National Treasury RSA, 2022. GFIT, 2023; Indonesian Financial Services Authority (OJK), 2024, PCOB. 2021.

Note:

In the case of Malaysia, the mapping Is restricted to the common climate change mitigation activities as stated under Guiding Principle 1 (GP1), climate change mitigation of the document. "Activities to be developed in the future· are mapped as Indicative activities for the South Africa Green Finance Taxonomy. While technical screening criteria are under development, the ASEAN Taxonomy-Version 2 has been included only for the assessment of common or uncommon activities in scope, as they are indicated In the ASEAN Taxonomy- version 2 document through the provided activity list of selected focus sectors.

Note: **Data as of 04 July 2024**

Abbreviations: AD=Anaerobic digestion, ASEAN=Association of South-East Asian Nations, BGD=Bangladesh, CBI=Climate Bonds Initiative, CCU/S= carbon capture and storage CHN=China, CHP=combined heat and power, CMM=Coal mine methane, COL=Colombia,, DRR=Disaster risk reduction, DSM=Demand side management, EE=Energy efficiency, EU=European Union, ICT =Information and communication technologies, IDN=Indonesia, KEN = Kenya, KOR = Republic of Korea, , LKA=Sri Lanka, MDB=multilateral development bank, MYS=Malaysia, MEX = Mexico, MNG=Mongolia, PMD=Personal mobility devices, PNG=Papua New Guinea, PV=Photovoltaic, RE=Renewable energy, RSA=South Africa, SGP=Singapore, SWH=solar water heaters, THA= Thailand T&D=transmission and distribution.

EXCLUSION LISTS OR EXAMPLES

ENERGY

·Coal-fired power (EU. BGD. MOB, THA), All solid fossil fuel (SGP)
·T&D dedicated exclusively to fossil fuel power (EU, COL, RSA, MOB, CBI, KEN, SGP, MEX,THA)
·MDB: peat-fired power. Brownfield displacement of carbon intensive fuel with lower carbon fuel when electricity generation only, Fossil fuel upstream and midstream. Nuclear power. First generation biofuels unless sourced from waste. Utilisation of gas from oil or coal production.
·CBI: Coal or oil power or combined heat and power (CHP) without CCS; WHR from coal or oil power. coal mining or oil upstream
·SGP, THA: New gas power plants, Power plants dedicated to support fossil fuel infrastructure or operations

TRANSPORT

·Fossil fuel dedicated infrastructure (MDB,EU, COL, RSA, CBI, SGP, KEN, KOR, MEX, THA)
·New road infrastructure (CBI, SGP)
·MDB: transport of blended fossil fuels
·CBI: oil tankers or other ships solely transporting coal or oil, non zero-emissions HGVs. biofuel vehicles
·COL: Hybrid vehicles
·SGP, THA: Infrastructure encouraging maintained / increased ICE vehicle use; Parking facilities; Fossil fuel filling stations
·THA: Road/rail vehicles using biofuels

INDUSTRY

·CBI: Products dedicated to clean-up or efficiency of fossil fuel energy
·PNG: Upgrades to coal/oil/diesel/gas technologies or facilities

BUILDINGS

·SGP: Buildings dedicated to extraction. storage, manufacturing, transport of fossil fuels.

AGRICULTURE & FORESTRY

·CBI: agriculture/timber production on peatland
·MDB, Activities leading to deforestation
·MYS: illegal deforestation leading to soil degradation and release of Co2
·MEX: animal husbandry if outside agricultural frontiers, on wetland, or protected areas/with land use change

WASTE, WATER & SANITATION

·CBI: Landfill waste collection facilities, Landfill without gas capture

80. Across the mapped taxonomies commonly included activities and approaches to criteria setting vary, reflecting in parts the national or regional context and economic or sectoral composition

- Most frequently included activities are found in the sub-sector of **renewable energies** for power generation that are included in all taxonomies with uniform criteria for solar, wind and ocean/marine power as eligible in principle. However, eligibility criteria can differ for other forms of renewable energies such as geothermal, hydropower or bioenergy. For power generation, cogeneration or heat and cool from bioenergy in particular, approaches differ from general inclusion (whitelisting) to CO2 intensity thresholds or emission reduction targets against fossil fuel comparators without abatement technologies. In addition, varying requirements for biofuel sourcing and manufacture exist through differing types of forestry plans or the use of international and/or local sustainable forestry certification standards. **Energy transmission and distribution networks** are also commonly considered eligible, as long as they contribute to an increasing integration of renewable energies (often specified through average emissions-intensity thresholds) and reduce electricity losses. Some taxonomies include additional requirements that such networks shall not be used for the sole, or main purpose of supplying or distributing emission-intensive power (e.g. Colombia, EU, Singapore);
- Approaches to the inclusion of **lower-carbon fossil fuels and nuclear energy power generation** vary. Gas-fired power generation and efficiency and emissions improvements of other types of fossil fuel generation are either not eligible (South Africa, Colombia, Georgia) or can be subject to specified life-cycle emission thresholds over time (ASEAN, EU, Singapore, Thailand, Russia, and Sri Lanka for gas), have specific requirements for fuel switch away from coal or percentage of emission reduction (Mongolia), or are eligible in the context of multi-energy complementary systems (China). The Mongolian taxonomy also has special considerations for improved clean coal technologies in rural areas. MDB common principles exclude coal or peat for standalone electricity generation and any fossil fuel type for brownfield fuel switch in electricity generation projects. However, lower-carbon fuel switch and efficiency improvements are under certain conditions eligible for cogeneration and/or heat and cool generation, which is similar to the Malaysian approach. The Singapore taxonomy introduces a dedicated early coal phase-out activity that can be considered as a transitional activity for plants with financial close before December 2021 (no new installations can be eligible) and when sunset dates for phase-outs are in line with the IEA NZE scenario (2030 for OECD and 2040 for non-OECD countries). The MDB eligibility list features a similar activity for direct financing, policy actions, programs, or technical assistance to support the closure of fossil fuel plants. Common amongst taxonomies is the exclusion of thermal coal-fired generation activities and upstream and midstream activities related to coal. In the updated Indonesia taxonomy version 2, published in 2024, investments into captive (generating power for industrial activities) coal-fired power plants are eligible as transitional activities under the condition that GHG emissions are reduced by 35 per cent within 10 years of being connected to the grid compared with the 2021 average, and plants are closed by 2050 at the latest. Climate Bonds Initiative, China, EU, Republic of Korea, Indonesia include nuclear power generation while many other taxonomies do not feature this form of generation and the MDB common principles and the Bangladesh taxonomy exclude the activity explicitly;
- In the **transport sector**, all forms of zero tailpipe emissions transport, including EVs, railways or water vessels, as well as charging infrastructure and personal non-motorized mobility are included in green taxonomies. Approaches to other forms of low-carbon transport and for modal shift differ across taxonomies. Urban public transport in other than zero-emission modes can be considered as generally eligible or is subject to requirements for a shift to low-carbon transport modes within short to medium time horizons. Infrastructure investments, for roads, railways and waterways are similarly subject to varying criteria with regards to demonstration of GHG savings or modal shifts from high carbon modes. CBI excludes all new road infrastructure in principle. Most taxonomies exclude activities dedicated to the transport of fossil fuels and the Thai taxonomy excludes road and rail transport primarily using biofuels;
- In the **industrial and manufacturing sector**, the manufacture of renewable and low-carbon or energy efficient technologies and batteries (although not specified as a separate activity in all cases) are generally eligible for green finance. Approaches to energy and resource efficiency and emissions improvements differ with regards to sub-sector specific thresholds (ASEAN, EU, South Africa,

Russia, Colombia, Climate Bonds Initiative, Kenya, Sri Lanka, Mexico, Singapore), whitelist approaches (Bangladesh, Mongolia) or substantial reduction requirements (Georgia, Kazakhstan) including with differentiation based on technology and brown- or greenfield type of activity (MDB);

- In the **construction and buildings sector**, approaches vary regarding the energy efficiency and GHG emission performance standards of newly constructed and renovated buildings, which are based on regional, national or international standards or criteria. Generally eligible across taxonomies are individual energy efficiency measures and the integration of renewable energies in buildings. Less common activities are around ownership and the acquisition of buildings, as well as for low-carbon construction materials and public areas or buildings. In particular in some Asian taxonomies (ASEAN or Papua New Guinea), dedicated activities related to disaster risk reduction in the public infrastructure and buildings sector are included;
- Approaches to define **sustainable agricultural activities** including crops, livestock and associated land-use vary. While agricultural activities are commonly included in taxonomies, the requirements set out range from whitelisting (Bangladesh, Mongolia) and broad inclusion of a variety of agricultural practices (Colombia, Mexico), to criteria for demonstrating incremental or substantial emissions reductions or increased attention to bio- and methane gas treatment and soil conservation (MDB, CBI, Sri Lanka refers to a range of international certification schemes). Some taxonomies set a country-specific focus on sectors or activities according to national policy or economic priorities. In addition to seven sectors under the climate mitigation objective, the Colombia taxonomy presents three sectors of land use (livestock, agriculture and forestry) under a transversal approach given that these are responsible for 59 per cent of Colombia's greenhouse gas emissions. To tailor taxonomy usability to the specific context of mainly small landholders, land-use improvements are classified along three levels - basic, intermediate and advanced – to reflect implementation and cost considerations. Specific examples of the general sectoral criteria are given for the subsectors of coffee, rice, fruits and cocoa. Similarly, Mexico, Bangladesh and Indonesia specify a range of eligible activities in the agricultural sector including palm oil production and Mongolia and Georgia include sustainable textile processing and production. Reflecting local economic importance, sustainable eco-tourism is featured in seven taxonomies, and is also planned for future integration into the RSA taxonomy;
- **Forestry** is a frequently included sub-sector across all taxonomies with the general eligibility principle of maintaining and improving existing carbon stocks. However, specific eligibility criteria differ from general whitelisting for sustainable forestry activities to international certification schemes such as the Forest Stewardship Council, national forestry codes or requirements for detailed forestry management plans that can include carbon impact estimations according to varying time-periods;
- Various activities in other sectors including for climate-relevant **research and development, ICT and services provision** are included in some taxonomies, but with heterogenous activity descriptions or requirements. Increasingly, climate-relevant taxonomies include activities related to **disaster risk reduction**, often in the water sector related to flood defence and nature-based solutions, and some taxonomies include activities such as early warning systems (CBI, China, Mongolia), insurance (EU, Papua New Guinea, South Africa) or mobile payment systems and emergency power and communication systems (Papua New Guinea).

81. As noted in table 1.1 above, existing taxonomies regularly include the climate change adaptation objective, although the focus of taxonomy development so far remains mitigation-centric.. Most taxonomies adopt a process-based screening methodology for the adaptation objective rather than defining eligible adaptation activities. This is also motivated by the context specificity of adaptation actions within a given local environment, and the difficulty to establish sector or even cross-sectoral criteria for what constitutes an adequate adaptation measure. The do no significant harm principle (to other environmental objectives) based on national, regional or global resilience and biodiversity standards and codes often forms the evaluation baseline, as well as the general conduct of environmental and climate risk and vulnerability assessments. An example of a typical process based qualitative measurement framework for climate adaptation and resilience is the MDB Common Principles for Climate Change Adaptation Finance Tracking (ADB et al., 2022)) which is based on the three procedural pillars of

- 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.

82. A drawback of process-based approaches is that the absence of positive eligibility lists for adaptation and resilience poses challenges for the tracking of current adaptation-related spending and for the promotion of adaptation investments by private or public actors (Padmanabh et al., 2022). Methodologies to develop concrete adaptation and resilience taxonomies or activity lists to facilitate the tracking and incentivisation of public and private spending are being explored as a result. The United Nations Senior Leadership Group on Disaster Risk Reduction for Resilience includes in its 2030 recommendations the promotion of tracking of disaster risk reduction actions through the development and application of a global taxonomy and methodology for risk reduction related public expenditure, as well as the development of a resilience taxonomy to spur capital market investments (Senior Leadership Group on Disaster Risk Reduction for Resilience, 2024). CPI developed a taxonomy of climate-resilient infrastructure solutions against impacts of floods and droughts for the sectors of water and wastewater, transport, energy systems, AFOLU, and other/crosscutting including disaster risk management activities, and tracked related investments in 2019 and 2020 (Padmanabh et al. 2022). Another innovative approach developed a fiscal policy taxonomy for adaptation and resilience relevant spending across COVID-19 recovery policies. This adaptation taxonomy identifies categories and activities with potential direct and indirect adaptation and resilience benefits covering a broad range of sectors beyond traditional infrastructure measures (e.g. climate-resilience incentives in the tourism sector) and outlines potentially harmful expenditure items (Sadler et al., 2024). To enable private and public investors to systematically invest in the theme of climate resilience, the Climate Resilience Investments in Solutions Principles framework builds on existing taxonomies and defines resilience solutions companies as those that have a significant business offering of a technology, product, service and/or practice that enables others to prepare, prevent, respond to and recover from climate shocks and stresses by addressing systemic barriers to adaptation, including by removing information, technological, capacity and/or financial barriers to adaptation by others, or by directly reducing material physical climate risks or their associated adverse impacts on other people, nature, physical assets or other economic activities. The framework is designed to be applicable to listed companies and to support investors in portfolio construction for investing in adaptation and resilience, with a preliminary analysis resulting in more than 800 relevant companies, of which more than 200 are in emerging markets and developing countries, across the 9000 corporates included in the MSCI All Country World Index (Collins, 2024).

1.3.4. Methods used to aggregate estimates of climate finance flows

83. 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. Data are aggregated from the OECD DAC database, CFU, survey responses from DFIs, BNEF renewable energy databases, IEA, IJGlobal, Convergence, and CBI and are cross-checked to avoid double counting. In 2021, improvements to the methodology included implementing a revised sector classification that can be applied to both mitigation and adaptation finance flows as opposed to separate sector classifications for both themes. The revised sector classification is derived from drawing, among others, from the following economic activities classifications: MDBs, CBI taxonomy, IPCC, the EU taxonomy and OECD' CRS purpose codes. In addition, to estimate sources used for private finance in EVs investments, country-level assumptions on household/corporate market shares, auto-loan market shares and loan-to-value ratios were applied for the first time.

84. Aggregate estimates on climate finance flows from developed to developing countries include the OECD report series on climate finance and the USD 100 billion goal and Oxfam's Climate Finance Shadow Report. Since the fifth BA, the OECD has published an update in the series covering finance flows in 2021 using the same methodology as in previous reports (OECD 2023). In its report in 2023 analysing climate finance provided over 2019–2020, Oxfam changed its method to calculate the grant-equivalent or 'climate-specific net assistance' amounts. In its 2020 report, Oxfam calculated the grant-element average of bilateral concessional loans from individual countries based on its reporting to the OECD DAC using OECD methods, and applied the country grant-element average to climate-related concessional loans. Such data were available for seven countries and the average value (49.8 per cent) was applied to loan

values from other countries and multilateral institutions. In its 2023 report, Oxfam developed its own method of calculating the grant-element with alternative discount rates based on the long-term cost of borrowing funds for the issuing country at the time the loan is disbursed, with the addition of a risk margin based on an OECD assessment of the recipient country's credit risk. For a detailed description of the methods and ranges see the second report on the USD 100 billion goal (SCF, 2024a) and the report on the doubling of adaptation finance (SCF, 2023c).

1.4. Reporting on climate finance under the Convention and the Paris Agreement

1.4.1. Overview of climate finance reporting under the Convention and the Paris Agreement

85. This section focuses on the methods for reporting on climate finance flows under the Convention. This section focuses on the methods used to present information and data from the BR common tabular format submitted by Parties included in Annex II of the Convention on financial support provided to Parties not included in Annex I to the Convention, as well as such information provided voluntarily by Parties included in Annex I to the Convention. It also provides an overview of methods used in reporting on climate finance received by Parties not included in Annex I in their biennial update reports (BURs). The submission deadline for the BR5 by Annex I Parties was 31 December 2022 while non-Annex I Parties may submit BURs up to 31 December 2024.

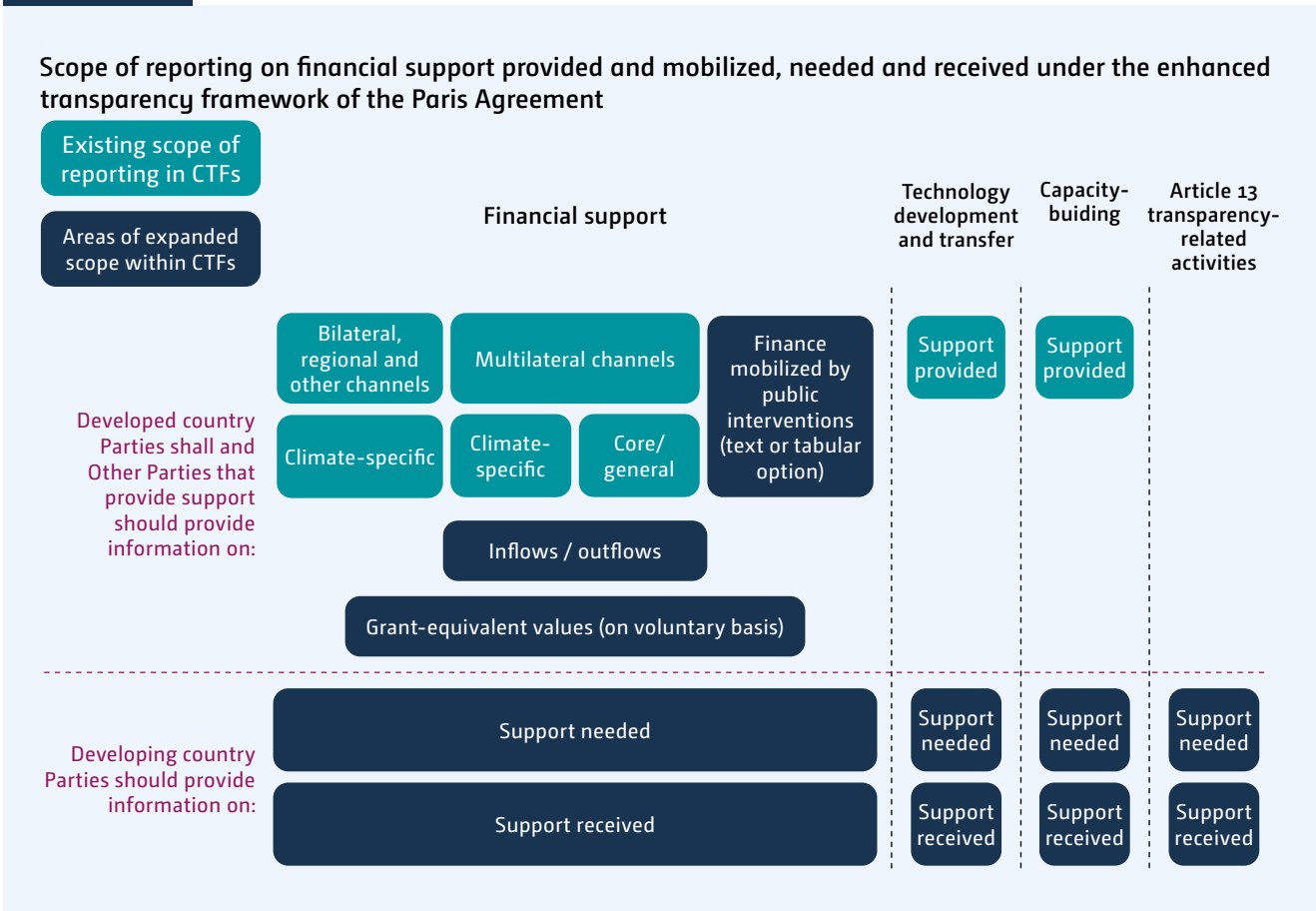
86. The final BR received by 31 December 2022 will be assessed to complete the final international assessment and review cycle, while the final BURs submitted by developing countries before 31 December 2024 will undergo last international consultation analysis cycle between 2024 and 2026

87. CMA1 adopted the modalities, procedures and guidelines for the transparency framework for action and support and decided that Parties shall submit their first BTR, which will include data on climate finance flows in 2021–2022 no later than 31 December 2024.[25]

88. In adopting the CTFs at CMA 3, a number of key changes in scope, clarity and ease of implementation for Parties were introduced in comparison with the existing reporting framework and CTFs in use by Annex II Parties (figure 1.4). In terms of scope, developed country Parties have three CTFs to report financial support provided through bilateral, regional and other channels, multilateral channels, and finance mobilized by public interventions with the option to report the latter information in either textual or tabular format. In addition, columns for providing information on grant-equivalent values of financial support provided and mobilized on a voluntary basis in accordance with decision 18/CMA.1 are featured in each of these CTFs. See chapter 1.3 of the fifth BA for further elaboration of the changes in the reporting formats(SCF, 2022a).

25) Decision 18/CMA.1 para 1 and 3

Figure 1.4



1.4.2. Reporting on climate finance provided and mobilized by Annex II Parties

89. Preliminary data submitted by Parties on climate finance provided and mobilized for the years 2021 and 2022 are outlined in chapter 2 below. However, an analysis of methodological approaches is not yet possible as the official BTR will be submitted after publication of the sixth BA. This section therefore focuses on methods used by Annex II Parties in reporting financial support provided in their BRs. As in previous BAs, it limits the analysis to Annex II Parties in order to avoid information from Parties without an obligation to provide complete information on methodologies used, which could distort the overview.

90. As at April 2024, all 24 Annex II Parties had submitted BRs and CTF tables. Of the 20 other Annex I Parties that may voluntarily submit information, 11 provided data on financial support in their BRs and CTFs. 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. Issues related to specific parameters that affect the aggregation and analysis of data are:

- Use of calendar and fiscal years: of the 24 Annex II Parties that submitted BRs, two reported on fiscal years, four Parties specified that their reporting was based on calendar years and all other Parties did not provide such information.
- Exchange rate information: of the 24 Annex II Parties that submitted BRs, 17 used OECD reference exchange rates for reporting in United States dollars, five used a national source for the exchange rate or did not specify the source and one Party did not report its contribution in United States dollar whereas one Party reported in United States dollar as its local currency;.
- 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 24 Annex II Parties that reported, 19 reported

core general support as general contributions to multilateral institutions; one Party reported the imputed climate-related share of its general contribution to the multilateral institution, three Parties did not provide any data under core general contributions and one Party did not describe its data. For climate-specific support through multilateral channels, 15 Parties reported the imputed climate share of their general contributions to multilateral institutions. three reported climate-specific as their imputed climate shares of general contributions only, five reported inflows to climate funds only and 15 reported both. The imputed chares are calculated based on a list provided by the OECD for each multilateral institution and fund as the proportion of climate finance in their total outflows for the reporting year. If an institution is not on the list, Parties stated they used shares provided directly by the institution or their own estimate.

- Climate-specific support through bilateral, regional and other channels: 20 Annex II Parties provided information on climate-specific support based on their use of the OECD DAC Rio markers. The coefficient varied between 30 and 50 per cent of the value of projects with climate mitigation or adaptation as a significant objective and between 85 and 100 per cent for projects with climate mitigation or adaptation as a principal objective. Four Parties applied case-by-case methodologies in identifying the climate-specific components of each project or reported climate-specific projects or programmes;
- 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 total of 20 Annex II Parties provided data at the project level; of these, 14 included the country, region and project or programme name. The project-level data varied in the level of information, ranging from the country of the project to the location of the project. Four Parties provided data at the aggregate country or region level by type of support (mitigation, adaptation, etc.);.
- Status:19 Annex II Parties reported funds as disbursements in their multilateral channel reporting, with four Parties reporting commitments to multilateral climate funds and one Party using both committed and disbursed for different institutions and funds. Through bilateral, regional and other channels, 12 Parties reported support as disbursements, six commitments only and five as either disbursements or commitments depending on the project;
- Funding source: 17 Parties provided information in relation to the funding source in the documentation box or in the BR, of which nine referred explicitly to OECD DAC definitions of ODA and OOF. While all the Parties reported ODA as a funding source, 11 Parties also reported OOF and five Parties reported other sources such as non-export credit, private foreign direct investment and other unidentified sources.
- Financial instruments: A total of 18 Parties provided information on definitions of financial instruments in the documentation box or in their BR, with 11 referring explicitly to OECD DAC definitions. In reporting their contribution through bilateral, regional channel, nine Annex II Parties reported grants only, and two reported grants and grant-equivalent amounts of other instruments. The remaining Parties reported a variety of instruments including concessional loans (8 Parties), equity (10 Parties), non-concessional loans (12 Parties) and other instruments (10 Parties) such as credit lines, syndicated loan, guarantee, loan, interest subsidy, direct investments and bonds.
- For contribution through multilateral channels, Parties reported use of various instruments. 15 of 24 Annex II Parties reported grants and nine Parties reported other instruments in addition to grants. Other instruments reported were concessional loans (one Party), non-concessional loans (one Party), equity (three Parties) and others (seven Parties).
- Type of support: all Parties reported their financial support as targeting mitigation, adaptation, cross-cutting or other under the ‘type of support’ parameter. Nine of 19 Parties that provided information in the documentation box reported using OECD methodology to identify the type of support while 10 Parties provided information on the methodology for the type of support.
- Sector: a total of 18 Parties provided information on sector classifications, with 14 basing their sector inputs on the OECD DAC classifications and five reporting in line with the classification listed in the reporting guidelines. Five Parties did not specify a methodology but either reported in accordance with classification listed in the guidelines or the nationally identified sector.

91. 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 24 Parties provided this information, 14 through the documentation box and 10 in the text of the BR. Of the 24 Parties reporting the information, 14 Parties indicated that "new and additional" resources consisted of newly disbursed or committed finance in the reporting year without carrying over from the previous year, six Parties consider "new and additional" finance as increases over previous commitments on development finance, while three 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.

92. 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 of private investment in developing country Parties. Fifteen Parties reported private finance mobilized through bilateral, regional and other channels in either their CTF table or included estimates in the text of the BR5s. Two Parties acknowledged the increasing role of private sector reporting the private sector finance mobilized towards climate in developing countries but did not include further information. Some Parties provided quantitative estimate of the private flow for the reporting period. One Party provided a quantitative estimate for one reporting year.

93. 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. A range of approaches to tracking private climate finance were reported: some adopted conservative approaches to assessment; some provided values only where agreed OECD reporting methods were available; others provided the total amounts of private finance mobilized without specifying the methodology. For Parties that provided information on their efforts to promote the scaling up of private investment, various approaches were reported, such as mobilizing capital through various instruments, employing micro- and co-financing, blending concessional finance with commercial resources, and using risk-sharing and insurance mechanisms to prevent and reduce losses. De-risking private investments and thereby catalysing additional resources from private sources was pointed out as important by several Parties

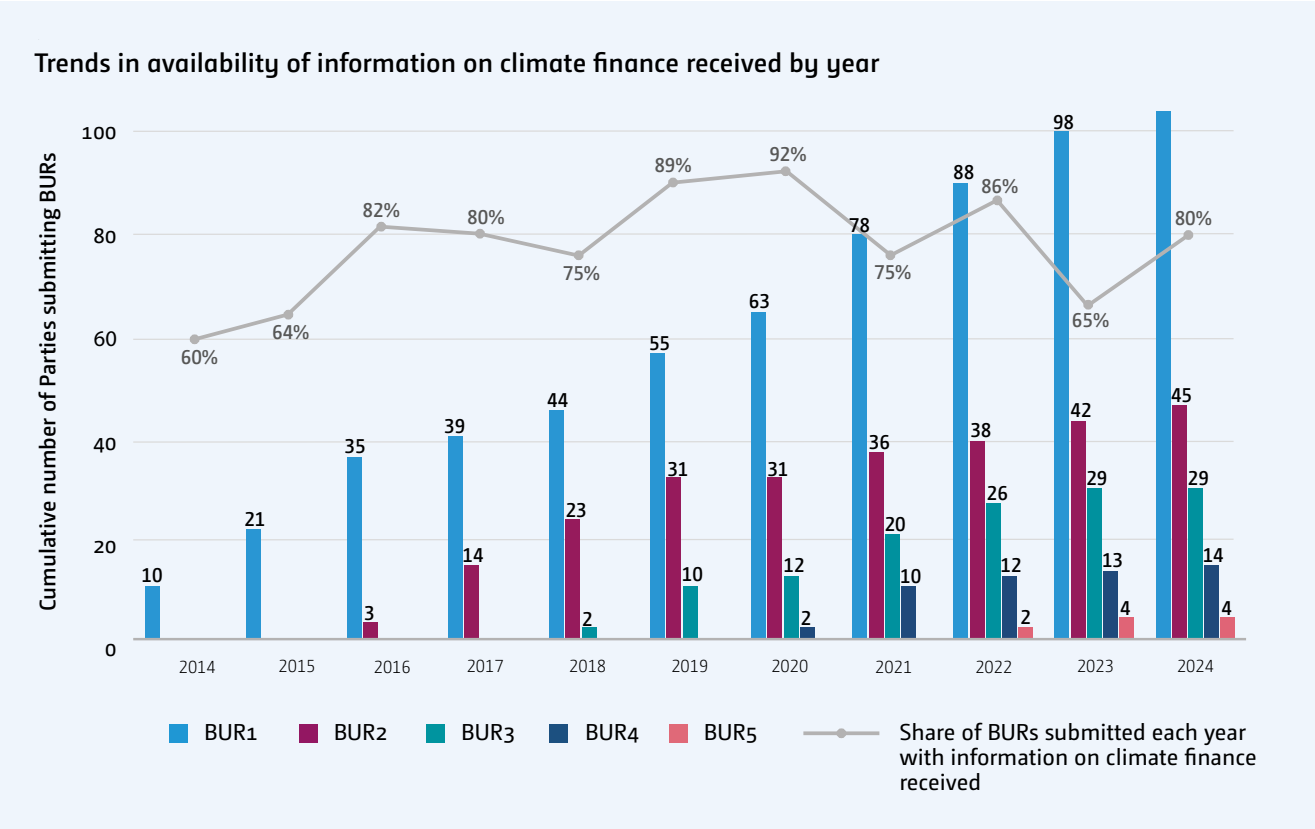
1.4.3. Reporting on climate finance received by non-Annex I Parties

94. 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 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] The CTFs for developing countries under the ETF will allow developing countries to report on support needed and received including information on the underlying assumptions, definitions and methodologies used to generate the information as mentioned above. .

95. Non-Annex I Parties continue to submit their BURs. The final BURs for non-Annex I Parties are those submitted no later than 31 December 2024.[27] As at 30 June 2024, the number of non-Annex I Parties submitting their first BURs rose to 104, an increase from 79 in the fifth BA. Additionally, eight more Parties have submitted second BUR, five Parties have submitted third BUR, and four more Parties have submitted fourth BUR since the fifth BA. Notably, four Parties have submitted fifth BURs. Not all BURs submitted contain information on finance received. Sixty-five per cent of the BURs received in 2023 and 80 percent of those received in 2024 include information on climate finance.

26) Decision 2/CP.17, annex III.
27) Decision 1/CP. 24, para. 38.

Figure 1.5



Notes: data as at 30 June 2024

96. Of the 89 Parties that have submitted information on climate finance received, 85 provide information in tabular formats, up from 65 in the fifth BA. Eight more Parties provide this information at a project level than in the fifth BA (64 in total), while other Parties provide information by sector aggregates, by institution aggregates, or by types of support (mitigation, adaptation etc.).

97. Annex C maps the tabular formats used in BURs to the CTFs adopted at COP26 for reporting on climate finance received at COP26 (see chapter 1.4.1 above). Most Parties reporting in tabular formats include project titles, project descriptions, amounts received, and timeframes, although this can often represent a range of years for all information in the table or where specific start/end years are given.

98. Parties continued using tabular formats for reporting information on financial instruments (46–49 per cent), implementing entities (37–35 per cent) and types of support (40–46 per cent) than in the fifth BA. Information that is reported the least across Parties in tabular format includes information related to the use, impact and results of finance received (eight Parties) and whether the finance represents commitments or received funds (20 Parties). Many Parties report both types of actors, recipients and implementers under one column and 60 per cent provide information on the contributors or source of the finance which is not required by the CTF.

99. Most of the Parties submitting BURs have one to three-year time lags between the submission year and the latest reporting year in their tabular formats, which is in line with the reporting requirements in the ETF. The provision of annualized data is necessary to support the compilation of information on climate finance received across Parties; however, several Parties provide aggregates over a range of years or project-level information without specifying the timeframe of the project.

1.5. Methodologies for measuring climate finance outcomes

100. Many multilateral and bilateral institutions continue to report on mitigation and adaptation outcomes at the project level in their official reports. This section provides an update to methodologies in use, where relevant developments have been made since the fifth (2022)

BA, which provided a detailed mapping and analysis of outcome and result frameworks. Chapter 3.3.3 below includes an analysis of expected and reported results from the multilateral climate funds, as synthesized in annex D.

101. Result and impact frameworks of the main multilateral and UNFCCC climate funds are in the roll-out phase after updates to the methodologies were introduced in 2019 by the GEF and AF, and in 2021 by the GCF. Funds typically report results bottom-up, whereby detailed project-level sub-indicators are aggregated to a smaller defined set of core portfolio-level indicators. The number of core indicators range between 4 (GCF) and 11 (GEF-8 Corporate Scorecard) per fund. In addition, some funds such as the GCF or FIP seek to capture the systemic or transformational impact of its intervention through qualitative or quantitative indicators that are part of the project-level reporting requirements.

102. MDBs and IDFC do not currently include information on mitigation and adaptation outcomes in their joint report. MDBs and IDFC developed jointly the climate resilience metrics framework, that since 2020 has guided the development of climate resilience metrics for individual projects on two levels: quality of project design (diagnostics, inputs, activities); and project results (outputs, outcomes, impacts). As a result, multilateral and bilateral contributors have variable approaches to reporting on climate finance impacts, including through using indicators. In 2024, the World Bank Group published an updated corporate scorecard for fiscal year 2024–2030 that consolidates the range of existing indicators, and covers the core climate-related result measurements (net GHG emissions per year, millions of people with enhanced resilience to climate risks) under outcome area 5 of the scorecard (Green and Blue Planet and Resilient Populations).[28]

103. More broadly, a recent OECD survey of 39 major bilateral and multilateral development finance providers found that a large majority (35) track and apply indicators for climate-related activities(OECD, 2023e). While individual result frameworks differ in nuances, the fifth (2022) BA noted a considerable overlap of result and impact metrics and indicators in use among multilateral climate funds, MDBs and bilateral DFIs, pointing to a convergence of impact methodologies across sources of climate finance. This assessment is in line with the OECD survey responses and previous studies by Boiardi and Stout (Boiardi and Stout, 2021), who find that common impact metrics and indicators are being used, while development finance providers do not converge towards a common impact measurement framework, but predominantly retain institution-specific frameworks[29]. Common impact metrics and indicators are presented below.

104. Impact indicators for mitigation, are focused on the quantification of GHG emissions mitigated or avoided across sectors such as energy, transport, industry, agriculture and forestry or infrastructure, buildings and cities. Some additional measures relate to the number of direct and indirect beneficiaries and the value in United States dollar of physical assets made more able to reduce GHG emissions. Energy sector indicators commonly cover additional low-carbon or renewable power generation capacity installed (in MW) or achieved energy savings in MWh/MJ. In contrast to the energy sector, core indicators beyond GHG emission reductions for transport, industry or other infrastructure (including buildings and cities) are more diverse across institutions. In the transport sector, the number of additional passengers using low-carbon transport or the number/kilometres of newly built transport infrastructure is captured in some frameworks. In industry sectors, the GEF reports a specific indicator on the reduction or phase out of chemicals of global concern to the environment.[30] In the agriculture, forestry, maritime, land use and ecosystems sectors, indicators for terrestrial and maritime areas under improved low-carbon management measured in hectares can cover a range of activities such as improved land and tenure management, reduction of deforestation or afforestation and restoration of ecosystems leading to improved carbon sinks.

105. Core impact indicators for adaptation are more diverse than in mitigation. The most common indicators reported include the number of beneficiaries, at times split by direct and indirect beneficiaries, and the land or maritime area, measured in hectares, brought under sustainable, improved or climate-resilient practices. These indicators are reported by all adaptation relevant climate funds (AF, GCF, GEF, LDCF/SCCF and PPCR) with the exception of PPCR for the number of beneficiaries. MDB result frameworks also capture one or two of these core indicators, while not always specifying the climate adaptation theme. Regarding the number

28) New World Bank Group Scorecard FY24-FY30 : Driving Action, Measuring Results (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/099121223173511026/BOSIB-1ab32eaff0051a2191da7db5542842

29) 20 of 38 OECD survey respondents reported having an own impact measurement and management framework.

30) Covering chemicals including persistent organic pollutants (POPs), mercury, hydrochlorofluorocarbons and highly hazardous pesticides.

of beneficiaries, the two themes of climate resilience and disaster risk reduction and enhanced access to drinking water and sanitation is dominant in MDB result frameworks. Many other adaptation indicators are expressed, including the number of institutions, countries, policies, assets or systems introduced through interventions that increase adaptive capacities and climate resilience or mainstream MRV and climate risk and vulnerability assessments. Particular attention is directed towards the establishment of early warning systems which t is measured as a standalone indicator by four climate funds, although only the AF reports it as a core indicator on the portfolio level. The GCF measures the value in United States dollar of physical assets made more resilient to the effect of climate change across sectors, and IDB has a similar indicator of the value in United States dollar of investments in resilient and/or low carbon infrastructure. As with the mitigation theme, the sectors of transport, industry and infrastructure including cities and buildings have few dedicated outcome indicators, with the exception of kilometres of climate-resilient road constructed or rehabilitated (PPCR), metres of coastline protected (AF) and two GEF measures related to the reduction and avoidance of chemicals and emissions from persistent organic pollutants.

106. Core and sub-indicator outcomes related to **gender** are reported on the level of gender-disaggregated reporting of the number of beneficiaries. The GEF, LDCF/SCCF and CTF provide gender-disaggregated portfolio-level reporting on number of beneficiaries while the GEF, AF, FIP and SREP do no not report gender-specific figures in their main publications. Among the MDBs, AfDB provides gender-disaggregated reporting at the portfolio level for climate-change related outputs such as beneficiaries from agricultural improvements. The GCF records gender-disaggregated beneficiary numbers on the project-level for six subcategories pertaining to climate-resilient livelihoods, food security and water security, early warning systems, innovations for climate resilience, and increased resilience to climate hazards. FIP, in its level 2 indicators, reports selectively on the number of land right titles emitted, split by gender.

107. A persistent challenge in climate finance measurement frameworks is that direct project output indicators are more easily defined than outcome-level indicators, especially for adaptation or those covering socio-economic aspects. The 2023 OECD survey on impact-related indicators used by development finance providers also indicated that most providers track development outcomes and impacts by using output proxies. Currently reported core indicators and sub-indicators provide descriptive metrics, for example on the number of beneficiaries or staff targeted (total or percentages), area of terrestrial or maritime land covered, or number of assets, institutions or policies introduced. While these measures offer information on the immediate output from interventions, desired outcomes, such as increased resilience, adaptative capacities, diversified and low-carbon-based incomes or jobs, are less visible in current frameworks. Some result frameworks entail concrete mitigation-related outcome indicators, such as the expected number of additional transport fares, or households/beneficiaries with new energy access.

108. To enhance the evaluation of resilience in project design and for resilience impacts, the World Bank Group piloted over 2021-2022 a Resilience Rating System (RSS) in 21 IDA19 projects and has announced to continue to apply the RSS in the IDA20 period. The RSS rates projects from C to A over two dimensions of resilience - resilience of at the project design stage, and resilience through, that considers the resilience outcomes and impacts of a given project (World Bank Group, 2021). Initial lessons learned from the piloting phase were that highly rated projects at the first dimension integrated comprehensive climate disaster and risk testing methodologies in the project design, and that the measurement of resilience impact is a valuable complement to other input metrics such as climate co-benefits measured in financial volumes, given that systemic resilience outcomes and benefits are not always proportionate to the amount of climate finance invested(WB, 2024). The pilot also highlighted that a large number of adaptation indicators are available for project monitoring and evaluation framework, across all economic, social and governance sectors, and that many resilience and vulnerability assessment methodologies already exist and are being utilized by public and private actors in the transport, water, energy and buildings sectors. Among climate finance providers, indicators dedicated to measuring the contribution to just transitions have not been designed yet, or reported at project or portfolio level. As a novelty however, the CIF, for its Accelerating Coal Transition (ACT) investment programme, has developed an initial monitoring and reporting toolkit including 11 outcome indicators that are to be reported in the coming years by MDBs on all ACT projects with CIF aggregation at ACT portfolio level (CIF, 2023a). These core indicators cover:

- Policies: number of policies, regulations, codes, or standards that have been amended or adopted;
- Readiness: coal transition strategies adopted (by governments and other stakeholders);
- Income security for employees of subset industries:

number and percentage of employees of retired coal plants/mines that have access to sustained income;
- Social plans and economic regeneration packages: number of direct beneficiaries of implemented social plans and economic regeneration activities;
- Mitigation: GHG emissions reduced or avoided (t CO2 eq) direct/indirect;
- Co-finance: volume of co-finance leveraged (United States dollar);
- Energy related outputs: plant decommissioning (capacity of existing coal power/heat generation assets accelerated for retirement (MW/GJ)), repowering (installed capacity of renewable energy (MW)), coal abatement (amount of coal diverted (MT)), and plant closure and repurposing (annual energy savings (GWh/year))

109. Besides the novel CIF ACT framework, many multilateral or bilateral DFIs already include in their portfolio-level frameworks job-related indicators, such as millions of new or better jobs, and the percentage who are women and youth (World Bank Group, 2024), or the number of new jobs created (IsDB), and wider indicators related to livelihoods and access to services, among others, the number of city dwellers and users who benefit from improved living standards (AFD), the percentage of households and communities having more secure access to livelihood assets (AF) and creating/securing local income (KFW).

1.6. Emerging methodologies relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement

110. Since the fourth (2020) BA, a number of methodologies and metrics have been developed by private and public actors relevant to the goal under Article 2, paragraph 1(c), of the Paris Agreement of making finance flows consistent with a pathway towards low-emission, climate-resilient development (hereafter referred to as Article 2.1(c)).

1.6.1. Overview and updates of approaches to tracking consistency with Article 2, paragraph 1(c), of the Paris Agreement

111. This section provides a non-exhaustive overview of broad categories of approaches to tracking and assessing consistency with Article 2, paragraph 1(c), of the Paris Agreement, covering approaches in the public and private sector at the portfolio- and project-level of finance flows and stocks that have been consolidated since the fourth and fifth BA. Table 1.2 presents a summary of the identified categories of methodologies, including the scope of finance and focus on low-emission (mitigation), climate-resilient development and associated examples or use cases that are discussed in more detail below. From this overview, it becomes evident that the current approaches cover not only private and public finances, but also assess consistency with the goals of the Paris Agreement in the context of both finance flows and stocks, similar to the IPCC's framing of alignment in the contribution of Working Group III to the AR6, on investment and finance (Kreibiehl et al., 2022), and address finance for activities that are considered climate-relevant, climate -neutral or that may be inconsistent with climate goals.

Table 1.2

Non-exhaustive overview of categories of methodologies and approaches for tracking consistency with Article 2, paragraph 1(c), of the Paris Agreement

Category	Scope of finance	Focus	Examples or use cases
(a) Target setting and alignment methodologies in the private sector	Portfolio and subportfolio level Commercial finance, flows and stocks	Mitigation focus	Net-zero target-setting initiatives and protocols/guidance Portfolio alignment methodologies Sustainable finance taxonomies and tracking of capital flows
(b) Target setting and alignment approaches in the public sector	Project and portfolio level Concessional (ODA) and/or non-concessional finance, flows and stocks	Mitigation and climate resilience	MDB and DFI Paris Agreement or SDG alignment approaches Portfolio alignment methodologies of public investors Sustainable finance taxonomies and domestic finance tracking
(c) Methods for climate resilience in the public and private sector	Project and portfolio level Concessional and/or commercial finance, flows and stocks	Climate resilience	Financial risk management approaches Paris alignment approaches including. scaling-up resilience finance and avoiding maladaptation Climate risk and vulnerability assessments Climate resilience taxonomies and domestic finance tracking
(d) Transition finance methodologies in the public and private sector	Project and portfolio level Concessional and/or commercial finance, flows and stocks	Mitigation	Transition finance guidance and taxonomies Transition plans for corporates and financial institutions
(e) Disclosure frameworks and supervisory assessments (mainly public sector)	Portfolio-level Commercial finance, flows and stocks	Mitigation and climate resilience	Climate-related disclosure frameworks (mandatory or voluntary) Transition plan regulations Climate stress testing and scenario analysis (macro- and micro-prudential supervision)
(f) Third-party assessment methodologies (civil society)	Project and portfolio level Concessional and/or commercial finance, flows and stocks	Mitigation focus	Assessments of fossil fuel subsidies globally Assessment of commercial fossil fuel related financing and investment Assessment of clean energy to fossil fuel financing ratios (globally, public and/or private) Alignment indicators and trackers for MDB and DFI financing

Net zero target-setting and alignment methodologies in the private sector

112. The goal outlined in Article 2, paragraph 1(c) of the Paris Agreement contributed to the emergence of the concept of climate alignment of investments and financing and led to the development of net zero target-setting and alignment methodologies to assess progress (Noels and Jachnik, 2022). Individual financial institutions and private sector initiatives are increasingly mainstreaming the practice of formulating climate related commitments and targets (such as net zero or emissions reductions targets) and methodologies to align their financial portfolios over time towards that commitment. Sub-sector initiatives such as the NZAOA and NZBA under the GFANZ umbrella have developed guidance documents and target setting protocols for member institutions, and civil society organizations and commercial service providers also developed own approaches for assessing and tracking the consistency of finance flows (Schwegler et al., 2022) .The dynamic landscape of voluntary guidance for net zero approaches in the private sector is underlined by a survey in 2024 by the Oxford Net Zero Engagement team which found at least 37 existing voluntary guidance documents, standards or assessment frameworks for net zero governance (Becker et al., 2024).

113. *Climate-related commitment and target-setting* refers to financial institutions or non-financial corporates expressing time-bound commitments on how they intend to make their financial or non-financial operations consistent with specified climate-related goals, in practice most often a temperature or emissions reduction goal. Most frameworks set this goal in relation to a 1.5 °C pathway, referencing the temperature goal of the Paris Agreement, or refer to net-zero by 2050, for example target setting initiatives under GFANZ and the Race to Zero or third-party target setting initiatives such as SBTI and TPI. Timeframes for target-setting protocols generally involve a long-term goal, and in recent years methodologies have emphasized the integration of short- to medium-term goals (e.g. five-year or 2030 intermediate targets) to facilitate the ability to assess progress and create a sense of urgency.

114. *Portfolio alignment methodologies* are employed to operationalize these climate-related targets, by breaking emission reduction or temperature targets down to the financial portfolio and individual investments. At present, most approaches define sub portfolio targets and apply tailored assessment methodologies to specific sectors or asset classes, and aggregate these methodologies to the portfolio level. Tracking and reporting of progress are fundamental components to foster assessment against targets and pathways identified at the outset of alignment methodologies (Wissenburg et al., 2021). Owing to their focus on transitioning finance on a pathway over time, finance alignment methodologies are considered to eventually cover all types of flows and stocks in a portfolio, including emissions-intensive activities, and imply the increase of finance towards climate-positive and neutral activities, with a parallel reduction of finance for high-emission activities in line with appropriate sectoral, regional and national pathways consistent with the goals of the Paris Agreement (CPI, 2021; Noels and Jachnik, 2022).

115. Some of the most common design elements of alignment methodologies and where different approaches exist are, among others (Becker et al., 2024):

- What emission reduction or climate scenarios are being used (see chapter 1.6.2 below for a detailed analysis of commonly used reference pathways);
- What metrics are being used for quantifying emissions reductions (absolute emissions or emissions intensity, which can be either finance- or production-based metrics);
- What scope of emissions are being covered (Scope 1 and 2 emissions being included in all methodologies, while Scope 3 emissions along the value chain are considered to a variable degree, often at the discretion of the financial institution, depending on data availability or materiality assessment). Also the treatment and inclusion of offsets and avoided emissions can differ considerably across methodologies;
- What finance flows and stocks (asset classes) are being considered, potentially comprising listed and private equity, corporate debt, real estate and infrastructure investment portfolios as well as sovereign bonds (depending on the asset class coverage, the choice of metrics for GHG emissions and other parameters can differ considerably);
- Whether methodologies employ one or more alignment metric (focusing on GHG emissions or temperature alignment only. or integrating complementary indicators such as concrete implementation actions and forward-looking climate-relevant capital allocation);
- How individual corporate or sector alignment assessments are aggregated to the portfolio level, including across asset classes, of financial institutions, given that these sub-portfolio methodologies may rely on different sectoral emissions pathways, may use a different emission

metrics or have different scope of emissions;
- How progress is reported on: at present, different levels of information are provided for example in the NZBA, NZAOA, and Paris Aligned Investment Initiative progress reports on the assets under management of institutions that have any target setting protocols (included in all), how much of these assets under management are actually captured by the (subportfolio) alignment methodologies and which asset classes are excluded (partially included), and how much of AUM is already aligned with identified pathways or short-to mid-term targets (partially included).

116. Regarding approaches to GHG emissions metrics, the fifth (2022) BA provides an overview of common approaches for corporations, covering absolute emission contraction approaches, sectoral decarbonization (SDA) approaches and economic intensity contraction / GHG per value added approaches. The ASCOR investment framework and database is a newly established methodology to assess the climate consistency of sovereign debt, which was jointly developed by financial industry actors, the bodies backed by the United Nations and academia.[31] The framework assesses countries climate performance along three dimensions of emission pathways, climate policies and climate finance covering 13 topical areas of climate performance. Binary indicators and quantitative metrics guide the climate rating of countries within each topic areas and can be used by investors to inform their consideration of climate change in sovereign debt portfolios (Scheer et al., 2023).

117. While initial portfolio alignment methodologies started out with a focus on GHG-based alignment metrics including in many instances portfolio-level implied temperature rise (IPR) indicators, these approaches have also been subject to critique regarding their transparency in methodological design choices, aggregation across sectors and asset classes, which makes it difficult to assess the performance of sub-portfolio or individual investments (OECD Research Collaborative Tracking Finance for Climate Action, 2023). Other approaches are emerging that provide a set of different alignment/ consistency indicators, such as the Swiss Climate Scores with six dimensions. Beyond historical and projected emission trajectories, these may include among others, governance and engagement indicators and forward-looking capital allocation plans. Another forward-looking component is the increasing demand for transition plans by FIs and corporates, to credibly demonstrate plans to execute climate related targets and indicate the direction of travel for portfolio-alignment methodologies. As part of transition planning, existing voluntary frameworks generally require companies to also disclose how these contribute to a just transition (Becker et al., 2024).

Net zero target setting and alignment methodologies in the public sector

118. As alignment methodologies quickly emerged in the private financial sector, public sector FIs and regulatory supervisors including central banks started to devise their own methodologies to assess, implement and track the consistency of finance flows with the Paris Agreement.

119. The MDBs have developed since 2019 a Paris Agreement Alignment (PAA) framework, anchored on the parallel assessment of investments' compatibility with national NDCs and consistency with (economy-wide, sectoral, regional) pathways to meet the mitigation goals of the Paris Agreement. The PAA is different from the MDB joint climate finance tracking methodology in so far as it focuses on the project's consistency or not with the country's low-carbon and climate-resilient pathway, rather than assessing whether it provides an active contribution to mitigation or adaptation. The updated guidelines provide examples for investments into social services or health systems that can easily be considered Paris Agreement aligned as they will not negatively impact climate change, while these investments may not include climate-relevant financing components that are eligible under the climate finance tracking methodology. The PAA entails methodologies for different financial instruments. As opposed to direct lending operations, financial intermediation (e.g. credit lines, equity funds, and guarantees), can require safeguard and due diligence processes that are oriented by a counterparty approach and ensuring FI capacity, if there is insufficient information on MDB proceeds of transactions (regular transaction-based approach). In 2023, the publication of the operational framework for Paris alignment extends the PAA to other financing instruments, including general purpose corporate financing and policy-based lending (ADB et. al 2023).[32]

120. In the case of mitigation, specific lists are available to provide guidance on universally (always) aligned activities in nine economic sectors, and four types of universally non-aligned activities, namely mining of thermal coal mining, electricity generation from coal,

31) Available at https://transitionpathwayinitiative.org/ascor.
32) Available at https://www.ebrd.com/ebrd-paris-agreement.

and extraction of and electricity generation from peat. Other fossil fuel or emissions-intensive activities that are not specified in the universally non-aligned list or in individual MDB exclusion lists are to be screened against compatibility with consistent mitigation pathways and the need to avoid carbon lock-in over time. Following on from the initial screening of universal criteria, the PAA is conducting that assessment through a decision-making process for alignment that considers national and sectoral circumstances, including NDCs and the principle of common but differentiated responsibilities.

121. In addition to the PAA methodology, individual MDBs have also adjusted their lending criteria or exclusion policies for projects related to fossil fuels with varying stringency in recent years (Gebel and Ryfisch, 2023). This adjustment refers primarily to ending financing for new coal and oil upstream and downstream activities, which almost all MDBs have adopted, and covers, to some extent, other fossil fuel sources.

122. Many other DFIs and public development financing institutions have adopted individual alignment approaches since, which are similar in nature to the MDB approach, and include a variety of assessment criteria or methods for:

- Activities that reduce GHG emissions while avoiding long-term lock-in;
- Exclusion lists of selected GHG-intensive activities deemed not in line with the goals of the Paris Agreement;
- Further screening considerations, such as the do no significant harm principle to other environmental objectives.

123. The EDFI announced in 2022 a Paris alignment approach similar to that of the MDBs. Its framework establishes three categories (aligned, misaligned and conditional financing) to assess the alignment of direct financing operations, whereby aligned activities concur with the MDB–IDFC Common Principles for Climate Change Mitigation Finance Tracking 2015 and misaligned activities include at a minimum the EDFI Fossil Fuel Exclusion List. Conditional activities are evaluated separately in a process that takes into account criteria for alignment at the system and asset level, is viewed from a transition risk perspective and will consider the do no significant harm principles.

124. At the Finance in Common Summit 2023, the forum of public development banks communicated a shared commitment to align finance with the 2030 Agenda for Sustainable Development and its SDGs (FICS, 2023), recognizing that achieving the SDGs requires making financial flows and assets compatible with these goals, including through Article 2, paragraph 1(c) of the Paris Agreement, Part 3 of the Sendai Framework on Disaster Risk Reduction and Goal D of the Kunming-Montreal Global Biodiversity Framework. In this context, IDFC published a proposed framework for aligning public and private finance with the SDGs covering three dimensions. (IDFC, 2023c) including institutional-level alignment of PDBs financing policies, strategies, vision and governance, operational alignment of finance including by ensuring geographic contextualization of investments, anchoring finance in national or local roadmaps and SDG impact assessment as well as, stakeholder mobilization and engagement with public and private financial sector actors to enhance common approaches for SDG alignment. and to strengthen PDB mandates and supervisory guidelines with a view to fostering sustainable finance opportunities.

125. Existing sustainable finance taxonomies (applicable to the private and/or the public sector), are also being used as tools to guide capital allocation decisions and to track finance flows. With voluntary or mandatory disclosures from taxonomies by real economy corporates and FIs (see para. 134 and chapter 1.6.3 below), such as green asset ratios or taxonomy-aligned capital expenditures, starting to be available in some jurisdictions, methodological frameworks are being explored to systematically monitor sustainable capital flows across asset classes and in the private sector. The EU Platform on Sustainable Finance developed in 2024 such a framework for private sector and real-economy finance flows, based on the EU Taxonomy, while public sector financing and household expenditures are out of the scope owing to lack of reporting requirements or data gaps (EU Platform on Sustainable Finance, 2024).

Emerging methodologies for consistency with climate resilient development

126. Methodologies for assessing and fostering the consistency of finances with climate-resilient development pathways are at an earlier stage as compared with mitigation net zero approaches. Since the fifth BA, an enhanced focus on climate-resilient finance flows and the avoidance of maladaptation through financing operations has been registered, however. Climate-resilience methodologies are noted for alignment of public sector financing at the project and portfolio level, private sector portfolio alignment methodologies and project-level financing, adaptation objectives in sustainable finance taxonomies or dedicated climate-

resilience taxonomies to assess public and private sector financing and physical risk exposure assessments of FIs by financial supervisors, including through climate stress testing and scenario analysis.

127. The **MBDs** PAA methodology for adaptation can be considered one of the earliest dedicated resilience methodologies for operationalizing Article 2, paragraph 1(c), of the Paris Agreement and is described in the fifth BA. As a component of the PAA, MDBs are also mainstreaming climate risk and vulnerability assessments at the project and asset level to regularly screen investments for climate resilience and to identify remedial measures. It has led to climate risk and vulnerability assessment processes being taken up by other DFIs, bilateral development agencies and in the private financial sector, especially in infrastructure-related sectors..

128. Private financial sector methodologies for assessing and managing physical climate risks and scaling up adaptation finance are less common in current market practice, but have emerging since the fifth BA, as can be seen from the UNEP Finance Initiative Climate Risk Tool Dashboard, which features 25 different assessment tools for physical risks that are available to financial market actors by 2024.[33] Private sector target-setting initiatives and protocols generally acknowledge the need to scale up climate finance and include targets for financing of climate solutions that can also include adaptation-relevant activities, such as the buildings and infrastructure sectors (GFANZ, 2023). A first private sector adaptation and resilience guidance was published for banks at the end of 2023 by in the United Nations Principles for Responsible Banking (UNEP FI, 2023). The guidance complements the traditional risk management approach to financial resilience with a more action-oriented impact management framework to actively enhance the resilience of clients, and by extension the resilience and adaptive capacities of economies and societies, and it acknowledges the interlinkages of climate, nature and SDG-positive investments. The framework includes the forward-looking components of setting targets that aim to align finance and investment with global goals and support NAPs, the development of adaptation action plans and implementation actions including adaptation investments, client engagement to identify adaptation needs, and the development of suitable financial instruments, including public–private partnerships and blended finance.

129. Sustainable finance taxonomies with climate-resilience or adaptation objectives contribute to assessing the consistency of finance with climate-resilience goals and are discussed in chapter 1.3.3 above, in addition to domestic climate budget tagging systems that provide information on the levels of adaptation-relevant spending.

Transition finance methodologies

130. The concept of transition finance and transition plans for corporates and FIs has received increasing attention since the fifth BA from both private sector actors and governments and regulatory agencies. While there is a multitude of definitions and use cases, transition finance is widely understood as a broader approach than green or climate finance, to support and finance the transition of the whole of the economy, including a focus on high emitting sectors and assets, towards climate compatibility and environmental sustainability, and often entails components of social or just transition considerations (G20 Sustainable Finance Working Group, 2022; Robins et al., 2023; ASEAN Capital Markets Forum, 2023; OECD, 2023d). Transition finance approaches and transition plans often complement overarching climate commitments such as net zero targets and alignment approaches.

131. In addition to transition components of 14 existing sustainable finance taxonomies, at least 11 jurisdictions (including ASEAN, Australia, China, EU, Japan, India, Singapore, Switzerland, Philippines, United States of America and United Kingdom of Great Britain and Northern Ireland) are developing or have in place disclosure frameworks, policies, or regulatory measures regarding transition plans and transition finance guidelines, and at least 14 private sector and non-governmental actors or initiatives have provided guidance and assessments for the design and credibility of transition finance and plans.

132. The relevance of transition finance to Article 2, paragraph 1(c) of the Paris Agreement can be identified since emerging frameworks and guidance are forward looking and focus on the implementation aspect of how to plan, finance and execute the transition of economic actors towards low-carbon and resilient activities over time (short-, medium- and long-term time horizons) often with the goal of net-zero by 2050, covering high-emitting sectors and in parts also the phase-out or managed decommissioning of technologies (in particular coal) that

33) Available at https://www.unepfi.org/themes/climate-change/the-climate-risk-dashboard/.

are not considered part of the pathway towards a low-emissions, climate resilient economy. Some regulatory frameworks provide a direct link to achieving the goals of the Paris Agreement, such as the EU, United Kingdom, Transition Plan Taskforce, Singapore and ASEAN as do many non-binding guidance documents, for example those of G20, GFANZ and ICMA.

133. Methodological approaches, use cases and coverage of transition finance and transition plan frameworks differ considerably among existing frameworks. Various assessments have attempted to identify common dimensions or categories entailed in entity-level transition plan frameworks, which are summarized below (ICMA, 2024; CBI, 2023b; OECD, 2023d; NGFS, 2022b). The ambition levels, criteria and metrics within each dimension may vary considerably.

- Establishment of climate-related targets and commitments to provide strategic direction (mostly 1.5 °C or net zero by 2050) of an entity
- Documentation of implementation and operationalization via credible transition and investment plans
- Use of science-based pathways that reconcile sectoral or regional or country-level considerations with global temperature goals
- Prioritization of engagement rather than divestment by engaging in dialogue with real-economy actors and policy makers to transition to climate-aligned practices and avoid rapid divestment as a last resort
- Development and reporting of metrics and indicators
- Verification of targets and implementation plans (third-party verification)
- Governance: embedding transition efforts into wider corporate governance (including board oversight, monitoring, human resources policies and renumeration, communications, skills and capacity building etc.)
- Social safeguards and just transition: many frameworks emphasize that the transition should include considerations and provisions of how to transition justly. Frameworks also generally include that to avoid greenwashing and remain credible, transitions can not last indefinitely (timelines/sunset dates) and need to avoid carbon-lock in.

134. Market practice on transition finance shows that it is not confined to specific instruments but can include debt instruments (transition bonds and loans), equity, and other blended finance structures, as well as to cover capital and operational expenditures for example through eligibility in sustainable or transition finance taxonomies.

Climate-related risk disclosure frameworks and supervisory approaches for managing physical and transition risks

135. Sustainability and climate-related disclosure frameworks for corporates and FIs are being developed and introduced in an increasing number of jurisdictions worldwide, through both voluntary and mandatory regulatory initiatives. These disclosure frameworks support the provision of information on the climate and environmental impact on the financial standings of corporates (single materiality), and may also include information on the impact of corporates on the climate, the environment and society (double materiality). Climate related disclosures are meant to inform supervisors, investors and wider society about the climate-related financial risks and opportunities in the economy, with the expectation of mitigating the mispricing of assets or the misallocation of capital to activities with high transition or physical climate risks, or with detrimental environmental and social impacts (Reserve Bank of India, 2024).

136. The industry body IFSR published the ISSB sustainability and climate-related disclosure standards IFRS S1 and S2 in 2023, which are meant to follow up on the TCFD recommendations and provide a global baseline for sustainability standards and to consolidate other frameworks such as the Climate Disclosure Standards Board, the Value Reporting Foundation's Integrated Reporting Framework and the Sustainability Accounting Standards Board.[34] In parallel, governments have committed to implementing disclosure rules based on the ISSB (e.g. Brazil, Canada, Japan, Mexico, Singapore and United Kingdom) or published own guidelines that are globally interoperable while reflecting various jurisdictional or environmental considerations (e.g. China, EU, India, Republic of Korea and United States) (FSB, 2023).

137. Existing disclosure frameworks are largely based around four pillars of describing sustainability governance, strategy, risk management frameworks, and (quantified) metrics and targets used to describe and assess sustainability performance. Disclosure frameworks by ISSB and in India also ask for information on how

34) Available at Available at https://www.ifrs.org/sustainability/knowledge-hub/introduction-to-issb-and-ifrs-sustainability-disclosure-standards/.

the latest international agreement on climate change (including jurisdictional commitments) or whether scenarios aligned with the Indian NDC have informed climate targets and strategies. Among metrics and targets, commonly reported information covers, among others:

- GHG emissions (Scope 1 and 2 are universally included, while Scope 3 requirements vary considerably between mandatory and voluntary reporting, or where material and data are available);
- Financial impacts of climate transition and physical risks;
- Climate-related capital deployment and opportunities (through indicators such as climate solutions financed, business segments or assets that are climate aligned)

Assessment methodologies for consistency of financial flows by non-financial actors and civil society

138. Third-party actors and civil society organizations, academia and commercial service providers significantly contributed to the development of portfolio alignment and target setting methodologies (e.g. SBTI and TPI) as well as associated disclosures (e.g. CDP, TCFD and ISSB) in the private sector. To enhance transparency and measure progress on Article 2, paragraph 1(c) of the Paris Agreement, non-financial actors have also developed research methodologies to assess various aspects of the consistency of finance flows and stocks with climate or SDGs, which are mostly sector-, actor- or flow-specific:

- *Fossil-fuel related lending and investments in the private and public sector:* assessments are available for the level of fossil-fuel related financing, underwriting, or holdings of private FIs and in the public sector. In a landscape of many one-off studies with institutional or regional focus, a widely cited report series is the Banking on Climate Chaos report series which analyses the financing (including lending and underwriting of debt and equity) from the world's 60 largest banks for the fossil fuel sector and associated companies.[35] Furthermore, organizations assess levels of fossil fuel financing by public sector actors, in particular related to development financing originating from DFIs and export credit agencies but also with regard to domestic finances (see for example the work by Oil Change International or Urgewald);[36]
- *Clean energy to fossil fuel financing ratio:* another approach to assess progress in the financing landscape for climate action is the emerging concept of clean energy to fossil fuel financing ratio. In its flagship world energy and investment outlooks WEO and WEI, IEA (IEA, 2023d, 2023e) assesses the current ratio of fossil fuel financing and clean energy investments, and forecasts the required ratio in order to meet the 1.5 °C temperature goal according to its NZE scenario (see chapter below). BNEF has conducted similar assessments of energy supply investment ratios, comparing low-carbon to fossil-fuel finance, of the major FIs globally, and E3G is also using such a metric in its assessment framework for MDBs and DFIs.[37] First FIs such as Citi and JP Morgan have adopted such energy financing ratios for internal reporting;[38]
- *Fossil fuel and other environmentally harmful subsidies*: broad evidence is available on the levels of fossil fuel and other environmentally harmful subsidies in the land use, agriculture or fisheries sectors. IEA, OECD and IMF provide regular assessment of global fossil fuel subsidies and further research studies have assessed other environmentally harmful subsidies on a global or sectoral level (Koplow and Steenblick, 2022);
- *Assessment indicators and indices for MDB and DFI alignment*: NGOs have developed regular and comprehensive indices to track the consistency of MDB and other DFI finances with the goals of the Paris Agreement. One example is the E3G Public Bank Climate Tracker for MDBs and bilateral DFIs, which consists of a matrix of 15 indicators across six categories of climate finance, mitigation, risk and resilience, engagement and policy support, reporting and internal activities. It includes assessment metrics for, among others, green finance, non-fossil to fossil energy ratios and fossil fuel exclusion policies, adaptation financing, technical assistance or transparency on climate finance.

1.6.2. Updates of reference pathways in use

139. For assessing the consistency of actions with the long-term goals of the Paris Agreement, a fundamental

35) Available at https://www.bankingonclimatechaos.org/.
36) Available at https://priceofoil.org/research/ and https://www.urgewald.org/publikationen.
37) Available at https://about.bnef.com/blog/financing-the-transition-energy-supply-investment-and-bank-financing-activity/
38) Available at https://about.bnef.com/blog/citi-jpmorgan-first-adopters-of-energy-finance-ratio/#:~:text=BNEF%20estimates%20that%20JPMorgan%20facilitated,Citigroup's%20ratio%20at%200.6%3A1.

component is the identification of transition pathways of investments or financed activities, in particular with regards to emission reductions. Such pathways often apply decarbonization scenarios based on forward-looking integrated assessment models or national pathways for projected GHG emission reduction targets. Climate scenario analysis is increasingly being applied with regards to both climate change mitigation and climate adaptation and resilience. They can facilitate the determination of emission reduction trajectories and target setting and inform climate risk assessments and risk management approaches including stress testing.

140. Since the fourth (2020) BA, a number of new scenarios and models have been developed to directly support investor action on measuring consistency with the Paris Agreement goals, notably incorporating updates of Illustrative Mitigation Pathways by the AR6 in 2022. The scenarios and models presented in annex G have been recommended or used by public and private financial sector actors and initiatives because of their established authoritative methodologies or use-case specificity with regards to geographical disaggregation, sector coverage or target users.

1.6.3. Updates on metrics for climate-related physical and transition risks and opportunities and consistency of finance

141. Another cross-cutting component for measuring the consistency of finance with the goals of the Paris Agreement is the use of appropriate metrics to measure impact over time and often against the reference pathways identified above. Table 1.3 provides a non-exhaustive overview of metrics and indicator types for GHG emissions and financed/portfolio emissions, climate related transition and physical risks and opportunities, as well as capital deployment. These indicator dimensions can be identified in many disclosure frameworks, target setting and portfolio alignment methodologies.


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Table 1.3

Overview of metrics for climate impact and risk assessment and alignment in use in the financial sector

Type of Indicator	Example metrics
GHG emissions (absolute or intensity-based)	· Absolute Scope 1 and 2 GHG emissions in t/CO2 eq · Absolute Scope 3 GHG emissions in t/CO2 eq (often optional, or where data available) · Weighted average carbon intensity: volume of carbon emissions per million dollars of revenue in t CO2 emissions/USD million revenue · Physical: volume of carbon emissions per unit of output in t CO2 emissions/unit of output (sector-specific, for example MWh, v-km (auto), PKM (aviation), t steel, t cement) · Sovereign GHG emissions in t/CO2 eq (absolute, per capita, or per GDP adjusted for purchasing power parity)
Portfolio carbon footprint and financed emissions	· Financed emissions by asset class and/or industry (gross or intensity-based, Scope 3 disclosures may be optional or where data available/material) · Total carbon emissions for a portfolio normalized by the market value of the portfolio, in t CO2 emissions/USD million invested
Climate-related transition risks	· The amount or percentage of the portfolio with exposure to fossil fuel activities · Volume of real estate collaterals highly exposed to transition risk · Concentration of credit exposure to carbon-related assets · Amount and percentage of portfolio/revenue with exposure to coal
Climate-related physical risks	· Proportion of property, infrastructure or other alternative asset portfolios in an area subject to flooding, heat or water stress · Proportion of real assets exposed to 1:100 or 1:200 climate-related hazards · Expenditures or losses incurred and charges or capitalized costs incurred on the balance sheet due to severe weather-related events · Sovereign holding exposures to countries highly or moderately vulnerable to climate change (Notre Dame–Global Adaptation Initiative country index scores below 50) .
Climate-related opportunities	· Revenues from products or services that support the climate transition · Green asset ratio: ratio of exposures to green taxonomy aligned activities · Net premiums written related to energy efficiency and low-carbon technology opportunities · Proportion of homes delivered certified to a third party green building standard
Capital deployment	· Percentage of annual revenue invested in the research and development of low-carbon products/services · Percentage of the portfolio invested in renewable energy assets · Percentage of capital expenditures that are green taxonomy aligned · Investment in climate adaptation measures (e.g. soil health, irrigation, technology) · Amount of financing or investment deployed towards climate-related risks and opportunities (Reserve Bank of India) · Clean energy financing ratio (low-carbon to fossil fuel financing ratio)

Source: Author's analysis adopted from ISSB (2023), individual jurisdiction's disclosure regulations and individual FI sustainability and climate reports.

142. Regarding climate change mitigation, GHG accounting methods such as financed emissions (absolute GHG emissions of financed entities) and the carbon footprint, and revenue and physical based average carbon intensity are widely used concepts.

143. The PCAF standard is the most widely used industry-methodology to calculate real-economy financed emissions through lending or investment activities by FIs. Financed emission are classified under Scope 3 category 15 emissions investments of the universal GHG protocol standard[39] since the bulk of emission that may be influenced by banks and investors are taking place downstream in the real economy. The PCAF standard has been updated to provide sector-specific calculation guidance to calculate financed emissions for seven asset classes and provides four main carbon metrics, of which three are the most widely used and recommended in disclosure frameworks and target-setting initiatives. These are absolute carbon emissions (expressed in t CO2 eq) and weighted average carbon intensity (t CO2 eq/revenue). While absolute carbon emissions are important to track and communicate, the overall carbon footprint of FIs over time and against climate targets, the weighted average

39) Available at https://ghgprotocol.org/sites/default/files/2022-12/Chapter15.pdf.

carbon intensity metric facilitates comparability across asset classes since it does not require consideration of the equity ownership approach (percentage holding of FI in a real-economy corporate). It also allows the assessing of the sensitivity of FIs to transition risks, such as carbon prices. Another intensity-based measure is the physical carbon intensity (t CO2 eq/unit of production), which is often used for target-setting methodologies at the sectoral portfolio level.

144. The measurement of physical climate risk and exposure, while being subject to geographical, sector and asset class differences, is being mainstreamed in the real economy and by FIs and is helped by the roll-out of disclosure regulations. Metrics in use include the value of assets in zones of high risk, economic losses incurred owing to severe weather-related events, average climate risk scores by geography or sector and revenues or capital expenditures associated with specific activities or industries (UNEP FI 2024).

145. FIs have advanced the development of indicators and metrics related to the climate performance or risk exposure of countries in which they are invested in (through sovereign bonds, or company- and household level investments, loans and mortgages). Emission metrics and the use of climate risk vulnerability indices is common among FIs. The holistic ASCOR framework methodology (Scheer et al., 2023) for sovereign bond assessments includes among others:

- Emissions metrics including absolute, per capita or per GDP intensity (adjusted for purchasing power parity) based emissions (indicator EP1.a)
- Information on net zero targets, the existence and price level of national carbon pricing schemes fossil fuel subsidies and phase-out policies;
- Indicators related to climate adaptation policies such as the publication of a NAP, existence of a multi-hazard early warning system and being part of sovereign catastrophe risk pools (CP.5a,d,e)
- Indicators related to climate finance, for example, proportional contribution to the USD 100 billion commitment, three-year country's three-year average climate finance contribution as a percentage of GDP, or, for developing countries, transparent breakdowns of costs of implementing NDCs (indicator CF1a,b; indicator CF2.a).

1.6.4. Commonalities, divergences and gaps across methods in use

146. Various public and private sector initiatives and frameworks inside and outside the financial sector continue to develop and use methodologies to guide their approaches for tracking or making finance flows consistent with low GHG emission, climate-resilient development and for aligning with the goals of the Paris Agreement. While tools and methodologies are evolving dynamically, with the UNEP Finance Initiative Climate Risk Tool Dashboard currently featuring 72 different assessment tools,[40] indicative conclusions on commonalities and divergencies of approaches are identifiable:

- Portfolio-level and corporate decarbonization targets and approaches apply different temperature scenarios and ambition levels, while a convergence towards global temperature pathways of below 2 °C and 1.5 °C with low or no overshoot can be discerned in published methodologies and guidance (see chapter 1.6.2 above);
- While initial target-setting protocols and alignment tools were focused on long-term temperature alignment targets, including 2050 targets, coverage increasingly expands to intermediate and short-term time horizons, such as 2030 targets or five-year intervals, in order to steer implementation over time and adjust to climate policy and ambition developments;
- While ideal-type alignment methodologies and frameworks recommend the coverage of all subtypes of finance flows and assets and of financed GHG emissions, the coverage of financial asset classes and emissions varies owing to methodological differences and data gaps. Listed equity and bonds and real estate are widely covered asset types, while approaches for private equity and debt and sovereign bonds are more nascent (Noels and Jachnik, 2022). Regarding GHG emissions, FIs' level of reporting on Scope 3 emissions of financed companies or activities is partial and is often cited as an area for improvement (NGFS 2023; CPI 2024);
- Methods for the consistency of finance flows, as reviewed in section 1.6.1 are in place for public and private finances, but differ in their approaches and coverage. Sustainable finance taxonomies often cover private financial and non-financial corporates only while excluding assessment of public entities

40) Available at https://www.unepfi.org/themes/climate-change/the-climate-risk-dashboard/.

and investments (for example EU), and sovereign bond portfolios of private financial institutions are often covered to a lesser degree by alignment targets;
- Methodologies differ in their consideration of carbon removals and offsetting towards decarbonization efforts and targets. Given the uncertainty surrounding real-world emission reductions and future technology development, institutions and financial sector guidelines recommend a conservative approach to reliance on carbon offsets and removals for the underlying climate scenarios used, and in financial sector decarbonization targets and transition planning (GFANZ, 2023; High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities, 2022; NGFS, 2022b);
- Methodologies and approaches relevant to tracking consistency with Article 2, paragraph 1(c) of the Paris Agreement increasingly incorporate aspects related to just transitions and context-specific, equitable pathways across geographies and sectors for low-emission, climate resilient development. Sectorally, as well as regionally and nationally differentiated climate scenarios are being used to a greater extent in the financial sector to adjust expectations for consistent finance to the respective sectoral or national context. The assessment of finance according to NDCs and national circumstances and policy priorities is also visible in the Paris Alignment methodologies of MDBs and DFIs, and in sustainable finance taxonomies, such as those of ASEAN, Colombia, Mongolia, South Africa, Sri Lanka and others;
- Definitional differences are visible in existing portfolio alignment, sustainable finance classification or tracking methodologies with regard to green or climate-relevant finance, transition finance, and other types of finance flows including fossil fuel subsidies. Public and private sector actors report challenges and conduct work to determine the appropriate scope of these financing types and how to arrive at comparable classifications while also accounting for regional, national, sectoral or asset class specificities.[41]

147. Methodological uncertainties result from the heterogeneity and complexity of applied approaches and frameworks for target setting towards the goals of the Paris Agreement. Literature reviews of science-based target-setting initiatives and methodologies underline many issue areas and decision points that remain under discussion for enhancing the robustness of approaches (Bjørn et al., 2022; Noels and Jachnik, 2022). These are, amongst others:

- How to assess progress toward long-term targets in the absence of clearly defined interim or annual emission trajectories;
- Adequate choice of emissions scenarios;
- Ensuring alignment between aggregate individual targets using various approaches with the global carbon budget;
- GHG accounting methods and in particular the inclusion of scope 3 emissions;
- Ways of ensuring the implementation of decarbonization targets, through transition plans, financing strategies or other means;

148. The lack of sufficient data availability on GHG emissions, transition strategies and physical risk exposure to climate change impacts is a widely recognized challenge for the integration of robust climate related financial risk management frameworks into financial supervisory, and public and private banking and investment, practices. In particular, the need for further granular information on the national, sectoral and corporate or asset level is reported as an obstacle by FIs to assess the climate impacts of their portfolios, as well as to evaluate their own and counterparties' risk exposure to transition and physical risks (UNEP FI, 2024; OECD Research Collaborative Tracking Finance for Climate Action, 2023). Available data and methodologies suitable for less developed markets and small and medium-sized enterprises are a further challenge in this regard(NGFS 2022). International interoperability of climate-related or sustainability disclosure standards that can usefully be applied in various contexts and by various actor groups is therefore prioritized by international organizations, governments and financial sector bodies alike (G20 Sustainable Finance Working Group, 2024; WBG, IMF, and OECD, 2023; FSB, 2023)

41) See for example workstream HP3 of the Coalition of Finance Ministers for Climate Action, or the range of sustainable and transition finance taxonomies globally (chapter 1.3.3 above) for work on definitional issues.

2

Overview of climate finance flows in 2021–2022

2.1. Introduction

149. This chapter provides an overview of climate finance flows in 2021 and 2022 with data gathered and compiled from multiple sources to arrive at aggregate estimates for global climate finance flows (chapter 2.2) with sectoral breakdowns. Chapters 2.3, 2.4 and 2.5 focus respectively on domestic public climate finance flows, estimates related to South–South cooperation on climate finance and estimates on finance flows from developed to developing countries. Chapter 2.6 provides available data sets relevant to tracking consistency with the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement. Importantly, flows to developing countries comprise finance tracked through different sources and channels (multilateral, bilateral and private finance flows) and are not aggregated in the global estimates in order to avoid double counting across databases.

150. It is important to acknowledge when determining the amounts to be reported as climate finance, that reporting entities rely on their own operational definitions of the underlying concepts, such as climate finance, climate change and sector delineations (see annex B). Also, several 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 ODA; and other relevant classifications from various sources (see annex A). However, any such reporting differences are explicitly laid out throughout this chapter.

2.1.1. Data quality and remaining data gaps

151. In order to obtain accurate, comprehensive and comparable global climate finance estimates, the data sources referenced below have been assessed against the following markers (detailed in annex B). When confronted with insufficient details or lack of clarity, a conservative approach is preferred in order to underreport rather than overreport climate finance.

- Data quality denoting the quality of financial transaction information wherein a project- or product-level data tends to be reliable. A high quality of data is important to ensure that accurate information on the finance, resulting in projects that are consistent with a low GHG emissions and climate-resilient pathway, are reported.
- Data completeness 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 the availability of full and granular details on sources, origin and destination, sectors and instruments.

152. In order to ensure there is no double counting, several principle and measures are considered when aggregating global climate finance. Only primary financial transactions and investment costs i.e., the financing for a new physical asset or activity with direct or indirect GHG mitigation or adaptation benefits) are included in the global estimates. Secondary market transactions that often does not represent any new investment targeting climate-specific outcomes, but rather money being exchanged for existing assets, are excluded. Green bond issuances, for which proceeds data from private and municipal green bonds are included only when the finance represents new investments and not re-financing. Policy-induced revenue support mechanisms, such as feed-in tariffs or other public subsidies whose primary function is to pay back investment costs, are also not included. Both private research and development for new technologies and investment in manufacturing are excluded, because at the technology deployment stage such costs are capitalized and factored in the investment amounts of new projects that implement these technologies, increasing the risk of double counting.

153. The global climate finance flows are reported in United States dollar denominated figures and at face value in the given reporting year. This may introduce uncertainty in year-on-year comparative analyses in the event there are significant fluctuations in foreign exchange rates and inflation.

2.2. Global climate finance

2.2.1. Data quality and remaining data gaps

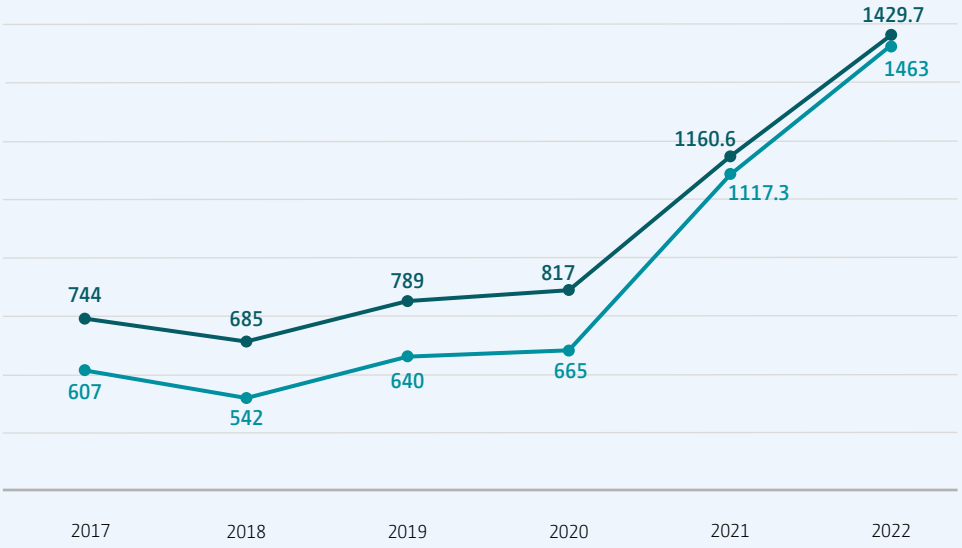
154. Based on the best available data, this section provides an overview of global public and private climate finance flows between 2019–2022, by sector, in sections 2.2.2–2.2.7. Table 2.1 presents the estimates of global climate finance flows, considering the quality and completeness of data gathered from multiple data sources. Figure 2.1 provides an overview of global

climate finance flow estimates broken down by sector and by public and private sources. This year, a new section (Section 2.2.8) is added on non-primary climate finance flows. These flows, not directly linked to emission reductions or adaptation, have been growing and may indicate trends in primary finance in subsequent years, such as carbon markets, investment in manufacturing capacity, R&D etc. These are though not included in the aggregated global flows to avoid potential double counting.

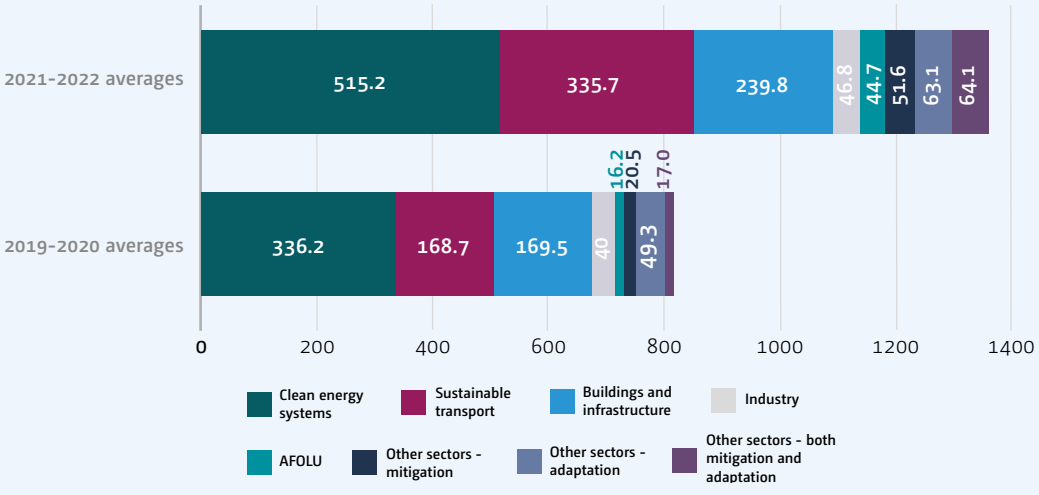
155. Annual climate finance flows in 2021–2022 are estimated to average between USD 1,273 billion and USD 1,312 billion, depending on the quality and comprehensiveness of the aggregated data sources (see box 2.1). This represents at least 63 per cent increase in climate finance compared with 2019–2020 (USD 653-803 billion annual average of lower and upper bound). The increase was driven primarily by sustainable transport investment, which doubled, while clean energy systems investment, and buildings and infrastructure grew by 53 per cent and 41 per cent. Adaptation finance also grew by 28 per cent. It also includes data improvements in lower bound estimates (Box 2.1).

Figure 2.1

Lower and higher bound estimates of global climate finance (billions of United States dollars)



Breakdown of global finance flows (billions of United States dollars)



Source: CPI (2023), CPI (2024), and IEA (2023)

Note: 'Adaptation' and 'Both mitigation and adaptation' categories contain overlaps with sectoral numbers; therefore, the numbers in the graph should not be aggregated to avoid double counting. See Figure 2.2 for more details

Box 2.1

Methodological changes and improved data coverage

The lower estimates of climate finance aggregate sectoral numbers from data sources for which project- or activity-level data are available. These estimates are derived from the global climate finance estimates in CPI's Global Landscape of Climate Finance (CPI, 2024). The upper estimates are a sum of the lower estimates and data in sectors for which project- or activity-level data gaps persisted but for which credible aggregate-level estimates were available, in particular energy efficiency investment for industry from the IEA. In addition to the trend change, the increase in the lower estimate of climate finance is also attributed to:

(1) **Expanded coverage of data sources**: additional data capture, notably for domestic public and private finance to three sectors (buildings and infrastructure, AFOLU and waste) has contributed an additional finance of USD 39 billion and 52 billion in 2021 and 2022 respectively.

(2) **Inclusion of IEA's energy efficiency building investment in the lower estimates**: more granular estimates for the building sector, available from IEA, were incorporated. This led to an additional increase of USD 130 billion and USD 131 billion in 2021 and 2022 respectively. In the past BAs this was included in the upper estimates. Consequently, a narrowing of the gap between the lower and upper estimates has been observed since 2021.

In all, an increase of USD 169 billion in 2021 and USD 183 billion in 2022 is attributed primarily to methodological changes and improve data coverage. This represents 14 per cent of the global finance in 2021–2022 or 27 per cent of the absolute increase between 2019–2020 and 2021–2022.

Figure 2.2

Climate finance flows in 2021–2022
(Billions of United States dollars, annualized)

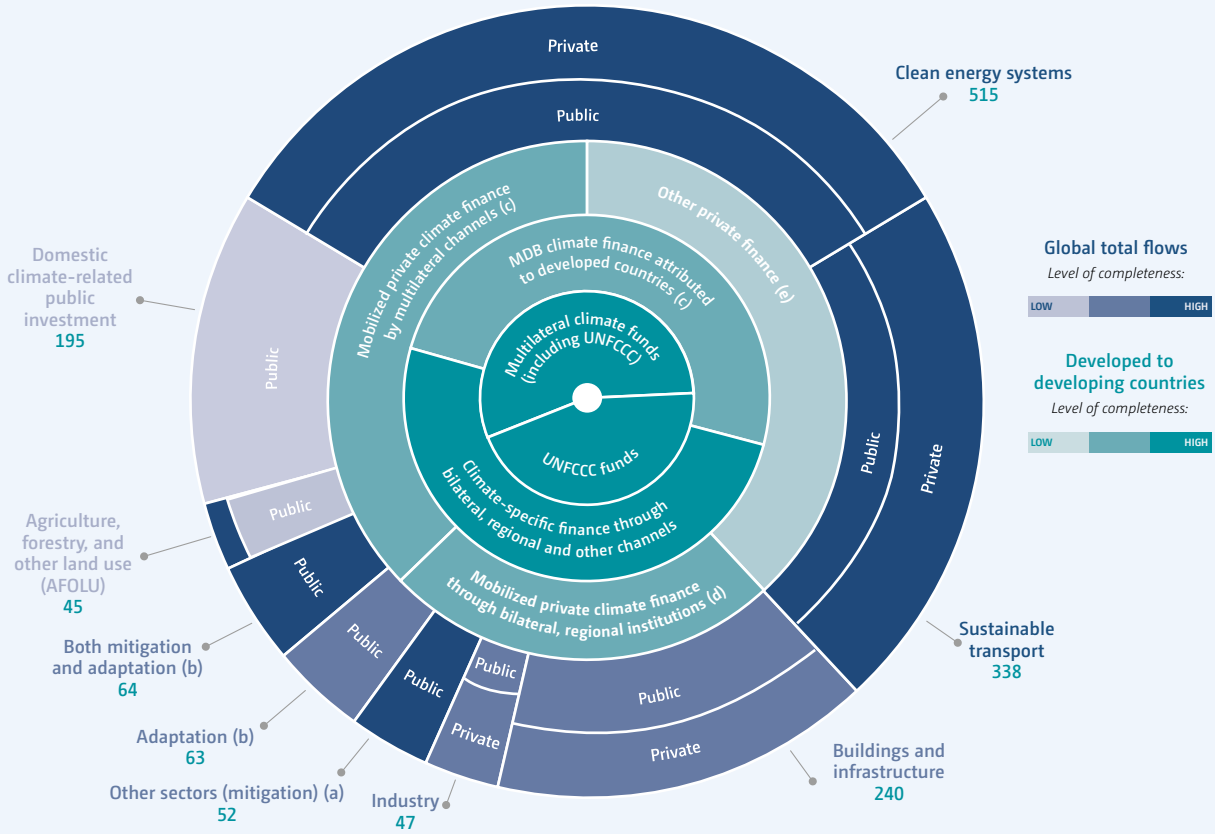


Table 2.1

Climate finance flows in 2021–2022 (Billions of United States dollars, annualized)

Sector			2019	2020	2021	2022	Data quality	Data completeness	Sources of data and relevant chapter
Global flows	Clean energy systems	Total	325	347	464	566	High	High	BNEF, CPI (2023), CPI (2024); chapter 2.2.2
		Public	108	116	212	293			
		Private	217	232	252	273			
	Sustainable transport	Total	175	162	263	409	High	High	IEA (2023), CPI (2023); CPI (2024); chapter 2.2.3
		Public	112	86	100	152			
		Private	63	76	162	257			
	Buildings and infrastructure	Total	160	180	225	255	High	Medium	CPI (2023), CPI (2024), IEA (2023); chapter 2.2.4
		Public	26	40	94	124			
		Private	134	140	130	131			
	Industry	Total	45	35	46	48	Medium	Medium	CPI (2023), CPI (2024), IEA (2023); chapter 2.2.5
		Public	9	5	3	14			
		Private	36	30	43	33			
	Agriculture, forestry, and other land use (AFOLU)	Total	15	19	45	45	–	–	CPI (2023), CPI (2024); chapter 2.2.6
		Public	15	18	37	36	High	Medium	
		Private	0.3	1	8	8	High	Low	
	Other sectors - mitigation[a]	Total	25	17	53	50	–	–	CPI (2023), CPI (2024); chapter 2.2.7
		Public	24	15	43	37	High	High	
		Private	1	2	10	13	High	Low	
	Adaptation[b]		42	56	55	71	High	Medium	CPI (2023), CPI (2024)based on multiple sources; chapter 2.2.8
	Both mitigation and adaptation[b]	Total	15	19	54	74	–	–	CPI (2023), CPI (2024)
		Public	14	16	46	65	High	High	
		Private	1	3	9	9	High	Low	
	Domestic climate-related public investment		102	102	205	185	Low	Low	Country-level reporting, National Landscape, CPEIRs; chapter 2.3

Table 2.1 (cont.)

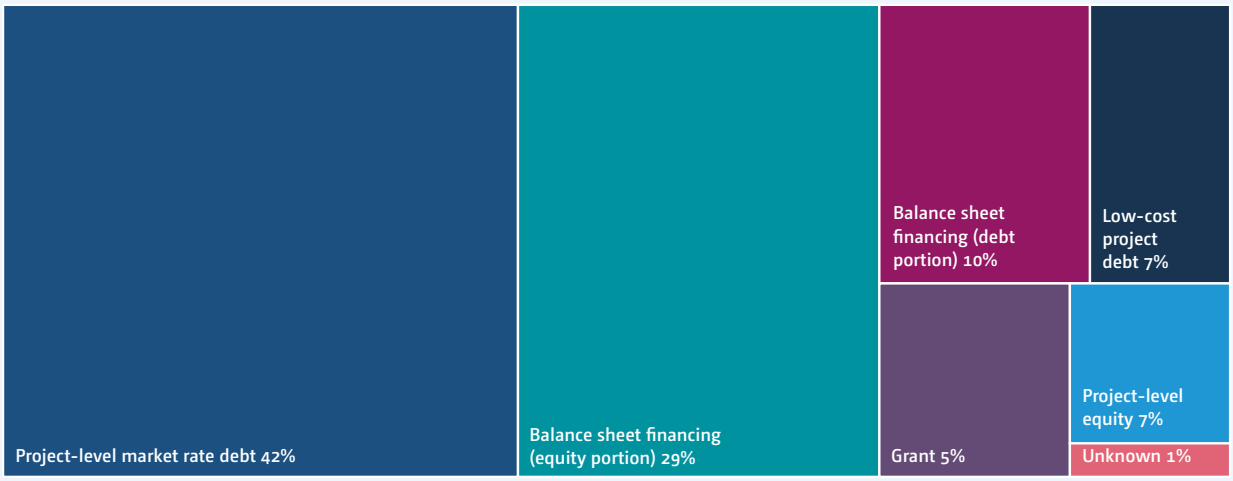
Developed to developing countries	UNFCCC funds	2.2	2.8	3.3	1.7	High	High	Chapter 2.5.2, Fund financial reports, CFU, OECD 2024
	Multilateral climate funds (including UNFCCC)	3.5	3.8	4.1	3.3			
	Climate-specific finance through bilateral, regional and other channels	31.7	31.9	34	42.7	High	High	Chapter 2.5.1 Annex II Party preliminary data from BTRs, subject to change
	MDB climate finance attributed to developed countries[c]	30.5	33.2	30.5	33.2	Medium	Medium	Chapter 2.5.2 OECD 2024
	Mobilized private climate finance by multilateral channels[c]	8.6	8.0	8.8	12.7	Medium	Medium	Chapter 2.5.4 OECD 2024
	Mobilized private climate finance by bilateral, regional institutions	5.8	5.1	5.6	9.2	Medium	Medium	
	Other private finance[d]	7.3	9.6	11.5	11.8	Medium	Medium	Chapter 2.5.4, CPI 2024, based on multiple sources

Notes: (a) Other mitigation investments include waste, water and wastewater, information and communications technology and other cross-sectoral and unattributed mitigation investment; b) The adaptation category contains USD 11 billion and USD 10 billion of overlap with sectoral numbers in 2021 and 2022, respectively. To avoid double-counting, these amounts should be excluded when aggregating global climate finance, sector totals are adjusted to account for adaptation and dual benefits (shown as a separate category) to avoid double counting. Because of this, the sector totals may differ from those shown in the table; (c) The category of both adaptation and mitigation contains USD 33 billion and USD 44 billion overlap with sectoral numbers in 2021 and 2022, respectively. To avoid double-counting, these amounts should be excluded when aggregating global climate finance by sector; d) This includes private finance in addition to finance mobilized through bilateral and multilateral channels and institutions.

156. Global climate finance by instrument: project-level market rate debt[42] comprised 42 per cent of the flows followed by balance sheet equity (29 per cent) and balance sheet debt (10 per cent). Low-cost project debt[43] and grant finance represented 7 and 6 per cent of total global finance flows, respectively (figure 2.3).

Figure 2.3

Breakdown of global climate finance by instrument, 2021–2022 average



Source: CPI (2023), CPI (2024);

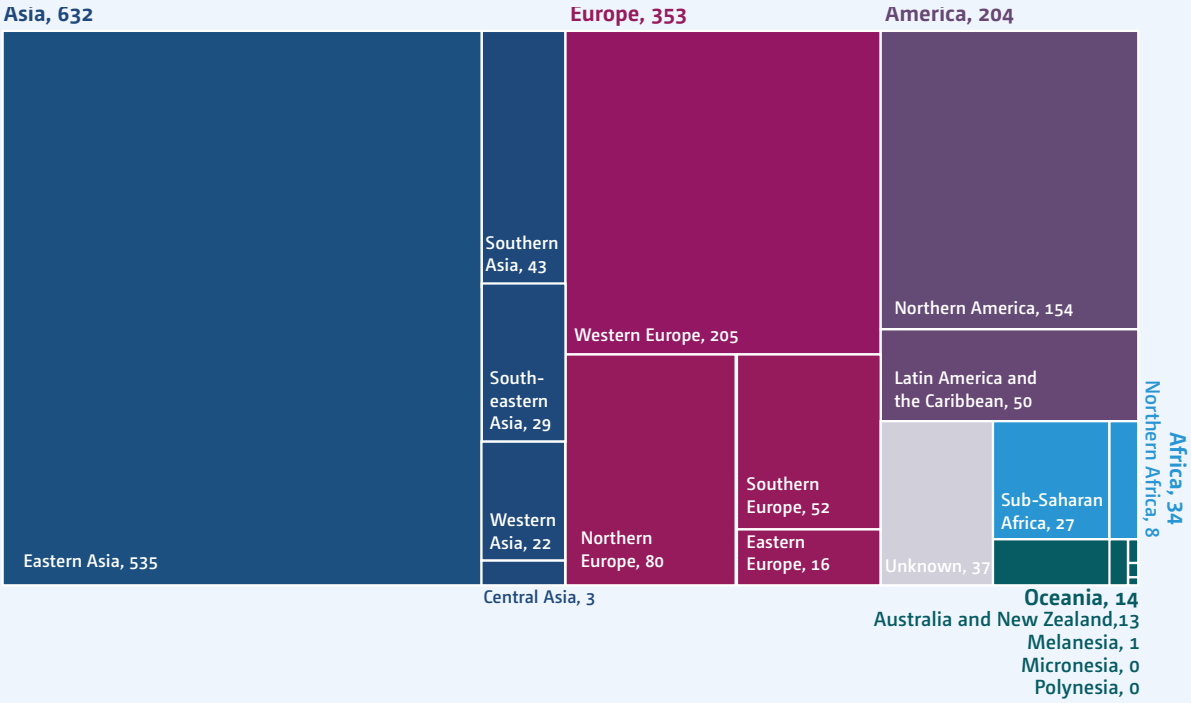
Note: This is the breakdown only of lower estimates due to the granularity of available information.

42) Refers to market-rate loans extended under standard market conditions; examples include, but are not limited to, term loans, credit facilities, bridge loans, mezzanine debt, etc.

43) Refers to low-cost loans extended at terms preferable to those prevailing on the market.

Figure 2.4

Breakdown of global climate finance by geographical distribution, 2021–2022 average



Source: CPI (2023), CPI (2024);

Note: this is the breakdown of the lower estimates owing to the granularity of the available information.

157. Global climate finance by region: At the geographical level, the majority of global climate finance flows were in Eastern Asia (42 per cent, USD 535 billion) during the 2021–2022 biennial. This was followed by Western Europe and Northern America, accounting for 16 per cent and 12 per cent respectively. All other regions together received less than a quarter (Figure 2.4). The regions are based on the M49 regional classification for United Nations statistics. 2.6 per cent (or USD 33 billion) of the global climate finance total went to or within least developed countries (LDCs), 1.0 per cent (or USD 13 billion) to SIDS and 15 per cent (or USD 188 billion) to developing countries excluding China. According to CPI's Landscape of Climate Finance in Africa, climate finance in Africa witnessed a 48% increase in climate finance flows from USD 29.5 billion in 2019/2020 to USD 43.7 billion in 2021/2022 (CPI, 2024b).

2.2.2. Investment in clean energy systems

158. Investments in new renewable energy generation projects reached USD 464 billion and USD 566 billion in 2021 and 2022, respectively, accounting for 40 per cent of total mitigation finance. This represents a 53 per cent increase over 2019 and 2020. While investment levels have risen, the costs of solar and wind power technologies have stabilized, primarily due to fluctuations in exchange rates, following a decade of consistent decline. In 2022, on a global scale, the levelized cost of electricity for offshore wind stood at USD 81/MWh, solar photovoltaic at USD 49/MWh, and onshore wind at USD 33/MWh (IRENA, 2023).

Table 2.2

Estimates of global investment in renewable energy technologies, 2013–2022 (billions of United States dollars)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CPI: Total	239	289	321	269	351	322	325	347	464	566
Public	35	47	62	52	66	51	108	116	212	293
Private	204	242	259	217	285	271	217	232	252	273
GSR	233	288	318	294	325	288	297	304	366	495
BNEF (renewable energy)	211	264	301	280	314	285	317	359	366	495
BNEF[a] (energy transition investments)	211	295	334	316	355	336	369	420	536	666

Source: CPI (2023), CPI (2024) and BNEF (2023).
[a]BNEF's energy transition investment includes investments in renewable energy, energy storage, electrified heat, sustainable materials, CCS and hydrogen.

159. During 2021-2022, solar photovoltaic, wind energy and hydropower consolidated their dominance in the renewable energy market, accounting for more than half of total investment in the sector. Commitments targeting more than one renewable energy technology also represented a significant share of total investments in renewable energy, accounting for about 36 per cent in 2020 (IRENA, 2023). Other technologies, such as bioenergy geothermal and marine energy, on average, accounted for to less than 5 per cent of total finance (CPI, 2023a; IRENA, 2023).

160. Other investments in clean energy system include energy storage, CCS and hydrogen. According to BNEF(BNEF, 2023a, 2023a), energy storage investments (excluding pumped hydropower, compressed air, and hydrogen) increased to USD 25 billion in 2021 and 2022 from USD 5.4 billion in 2019 and 2020. While hydrogen investments reached USD 0.7 billion. Investments in CCS also grew in 2021 and 2022 from USD 3 billion to USD 4.4 billion. Flows towards transmission and distribution[44] increased to USD 13 billion over 2021 and 2022 (CPI, 2023a).

44) These represent a lower bound estimate with a high level of certainty regarding its climate-positive impact. However, the overall global grid investment is expected to be much larger.


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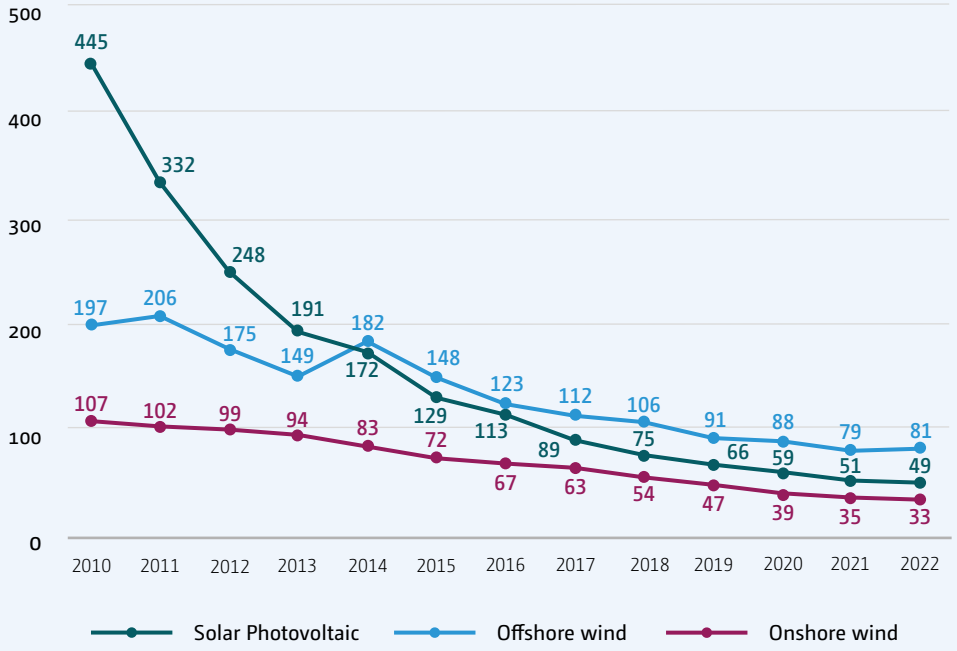
Figure 2.5

Global weighted levelized cost of electricity for solar photovoltaic, onshore wind and offshore wind (2010-2022, USD/MWh)



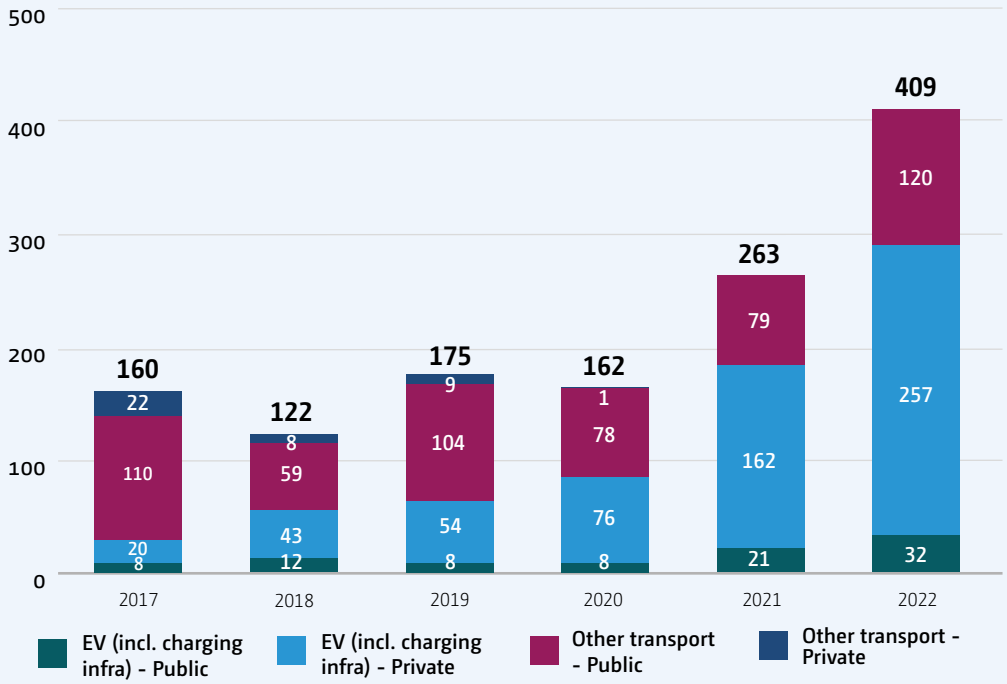
2.2.3. Investments in sustainable transport

161. Based on CPI (2023) and IEA (2024) estimates, global investments in transport increased significantly in 2021 and 2022, reaching USD 263 billion and USD 409 billion, respectively. This is almost double the annual average investment witnessed in 2019 and 2020 (USD 169 billion). Expenditure by public actors on transport increased by 30 per cent from USD 99 billion in 2019–2020 to USD 126 billion in 2021–2022, while private investment doubled, reaching an all-time high value of USD 209 billion in 2021 and 2022 on average. The increase in infrastructure development signifies a crucial approach aimed at kickstarting economic revival in the aftermath of the COVID-19 pandemic, bolstered by higher levels of government expenditure.

162. EV investment (excluding charging infrastructure) accounted for 70 per cent of total transport investments both from public and the private actors in the transport sector (CPI, 2023). Global sales of electric passenger vehicles have experienced exponential growth, surpassing 10 million for the first time in 2022 (IEA, 2023). EVs represented 14 per cent of global vehicle sales, up from around 9 per cent in 2021, and less than 5 per cent in 2020. Similar to previous years, China (60 percent), remained the largest EV market, followed by Europe and the United States. (IEA, 2023).

Figure 2.6

Estimates of global investment in transport 2015–2022 (billions of United States dollars)



Source: IEA 2021, CPI 2023, CPI 2024, and IJ Global.

Note: EV includes investments in EVs and charging infrastructure. IEA and CPI collected data on country-level retail prices and annual sales of all commercially available models of battery EVs, including the incentive structure for EV adoption, such as direct rebates for retailers, manufacturers and consumers, and tax exemptions or differentiated taxes for EVs compared with diesel and petrol vehicles. The 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). Unlike general subsidies, public incentives for EV purchases are included because they contribute directly to the consumption of low-carbon transport. Plug-in hybrid EVs are excluded from this analysis given their potential to pollute depending on the drivers' behaviour (CPI, 2023b, 2024)

163. In line with the increase in EVs, the installation of charging infrastructure also increased globally. As at the end of 2022, there were 2.7 million public charging points worldwide, representing a significant increase of about 55 per cent compared with 2021. The increased availability of public charging points can encourage EV adoption. Also, the charging point per battery EVs ratio typically decreases as the stock share of battery electric light-duty vehicles increases (IEA, 2023b). This growth rate is comparable with the pre-pandemic growth rate observed between 2015 and 2019 (IEA, 2023b). In monetary terms, USD 0.4 billion flowed to EV chargers in 2021 and 2022 on average (CPI, 2023).

164. Investments in other urban transport modal change and inter-urban transport projects remained almost the same in 2021 and 2022, at USD 100 billion, compared with 2019 and 2020 (USD 96 billion). This primarily contributed to the expansion of transport infrastructure, such as roads and railways in emerging markets including China (IDFC, 2023b).

2.2.4. Investments in buildings and infrastructure

165. Tracking energy efficiency investments is not straightforward. Often there is no common agreement on how to calculate the counterfactual baseline which remains uncertain and subject to change, nor is there a common understanding of the extent to which those investments are consistent with low greenhouse gas emission and climate-resilient pathways as minimum performance standards vary. Moreover, as energy efficiency projects are often components within larger programmes, these investments are difficult to isolate.

166. Therefore, the estimates for the sector are a combination of project-level data available mainly from public actors and IEA's building and infrastructure aggregates. In addition, investments in energy efficiency in certified green buildings were estimated (CPI, 2023c) using an energy efficiency cost premium, which improved data coverage for the sector. The cost premium refers to the incremental investment on energy efficiency improvement above a baseline of spending for conventional (less-efficient) equipment or service.

167. Investments in building and infrastructure averaged USD 24 billion in 2021 and 2022 (CPI, 2023; IEA, 2023), a 41 per cent increase from 2019 and 2020 (USD 170 billion). The growth was primarily driven by government stimulus programmes, new regulations, record sales of heat pumps and a global rebound in construction. However, inflation and rising costs, influenced by supply chain pressures, increased labour costs and higher material prices counteracted about half of the growth achieved through the aforementioned drivers. This meant that while the industry experienced substantial growth, the net benefit was reduced by the elevated costs and economic pressures (IEA, 2022b).

Table 2.3

Estimates of global investment in building and infrastructure, 2014–2022 (billions of United States dollars)

Source	2017	2018	2019	2020	2021	2022
CPI	**36.5**	**34.5**	**47**	**58**	**224**	**255**
Public	35.6	34.5	26	40	94	124
Private	0.9	.05	21	18	130	131
IEA	140	139	160	180	224	255

Source: CPI (2023). CPI (2024) and IEA (2023).

Note: with IEA providing more granular estimates for energy efficiency investments in the building sector, CPI incorporated IEA's energy efficiency data for the first time in 2021 and 2022, in the lower-bound estimates. Hence, the numbers will be similar for both CPI and IEA in the future.

2.2.5. Investments in industry

168. Data on climate finance in the industrial sectors remains limited owing to confidentiality restrictions on industrial processes and methodological issues on what activities and solutions should be included (CPI, 2023a). Tracked investments, based on project-level data, to industrial sectors averaged around USD 8 billion per year in 2021 and 2022 from bilateral and multilateral DFIs. IEA estimates energy efficiency, electrification and end-use-related investment in the industrial sector at USD 46 billion in 2021 and USD 48 billion in 2022 (IEA, 2022a). While there was a rebound in industrial sector investment in 2021, record raw material prices, and supply chain bottlenecks posed significant challenges, affecting further growth (IEA, 2022b).

Table 2.4

Estimates of global investment in industry, 2017–2022 (billions of United States dollars)

Source	2017	2018	2019	2020	2021	2022
CPI	**-**	**-**	**9.0**	**4.9**	**3**	**14**
IEA	35	40	45	35	46	48

Source: IEA (2021a), IEA (2023), CPI (2023) and CPI (2024)

2.2.6. Investments in sustainable agriculture, forestry and land use

169. The AFOLU sector is a significant net source of GHG emissions, contributing to 21 per cent of global net anthropogenic GHG emissions over 2010-2019 (IPCC, 2023a). Reforestation and forest sinks as well as their role in ecosystem protection and restoration, hold huge carbon sequestration potential, which are essential to meeting net zero targets. Despite efforts to improve the coverage of the data collected, significant gaps persist for public domestic finance flows and domestic and international flows from private actors (CPI, 2023a).

170. According to CPI estimates, average annual investment in mitigation, adaptation or measures with both mitigation and adaptation benefits related to AFOLU, as well as natural resource management, average at USD 45 billion in 2021 and 2022. That went into projects targeting mitigation (14 per cent), adaptation (17 per cent) and both areas (69 per cent). Most of these investments were by public actors (83 per cent) as data on private finance in the sector remain largely unavailable. Agriculture received 17 per cent of the total AFOLU sector investment followed by forestry (12 per cent) while 67 per cent of the investment could not be allocated to a specific sub sector (CPI, 2023).

171. Despite its significant impact on GHG emissions, agrifood systems receive only 4 per cent of total climate finance. This stark discrepancy underscores the urgent need for increased investment. The potential for repurposing public subsidies and attracting private investments can enhance climate interventions in this sector. Additionally, integrating financing approaches such as payment for ecosystem services programmes aligns with broader climate, nature, and development goals, offering a comprehensive solution to the challenges in agrifood systems (CPI, 2023d).

172. In 2021, the estimated biodiversity-related official development finance amounted to USD 18.5 billion, with agriculture being a primary sector, representing 15 per cent or USD 2.8 billion of the total (OECD, 2023b). The data also reveal that in the forestry and fishing sectors, biodiversity-related finance was the principal motivator behind multilateral investments, constituting 60 and 40 per cent of the investments in these sectors, respectively (OECD, 2023b). According to UNEP, 21 per cent (USD 41.5 billion) of the annual investment in nature-based solutions by public actors in 2021 was directed at sustainable agriculture, forestry and fishing (UNEP, 2023b).

173. Other estimates of finance in sustainable AFOLU do not offer global breakdowns of finance flows to different sub-sectors, nor clarify how the flows are consistent with a low GHG emissions and climate-resilient development pathway. According to Forests and Finance, USD 46.7 billion and USD 35.9 billion credit were provided to the “forest-risk sector” in the form of loans and underwriting facilities in 2021 and 2022, respectively (Forest and Finance, 2024). This forest-risk sector covers the beef, soy, palm oil, pulp and paper, rubber and tropical timber supply chains of more than 300 companies in South America, South-East Asia, East Asia, North America and EU. This clearly demonstrates the need to introduce and implement fiscal policy reforms to align unsustainable financing in the sector with the climate goals of the countries.

Box 2.2

Investment in methane abatement finance

Methane is a key driver of near-term global warming, with a 20-year warming power more than 80 times greater than that of CO2. Methane mitigation can yield significant short-term temperature reductions, and at significantly lower costs (UNEP and CCAC, 2022). The Global Methane Pledge, launched at COP26, was the first step in placing methane abatement at the centre of the global climate agenda, and since then, abatement efforts have notably increased. Launched in June 2022, the Global Methane Pledge Energy Pathway seeks to unite countries in maximizing methane mitigation in the oil and gas sector, with the aim of eliminating routine flaring by 2030 (European Commission, 2022). Nearly USD 60 million in funding has been announced by countries and supporting organizations to advance the Pathway's implementation through initiatives such as the World Bank Global Gas Flaring Reduction Partnership, the Global Methane Initiative, the International Methane Emissions Observatory, and the Global Methane Hub. In 2021, the Global Methane Hub, committed more than USD 300 million to accelerate political action and investment in methane reduction this decade (CCAC, 2023).

The Aiming Zero Methane Emissions Initiative, launched by the Oil and Gas Climate Initiative in 2022, involves 90 oil and gas companies committed to reducing methane emissions to "near zero" by 2030 (OGCI, 2023). The Too Good To Waste Initiative, launched by the Inter-American Development Bank in 2023, aims to accelerate solid waste management projects in Latin America and the Caribbean to reduce methane emissions. The Methane Finance Sprint announced at COP 28 that more than USD 1 billion in new funding had been earmarked for methane mitigation since COP 27 (White House, 2023). Also, an increasing number of countries are developing NAPs to address methane emissions, which outline steps, regulations, incentives, and reporting mechanisms to meet reduction targets within specified timeframes: Canada, China, Colombia, EU, Nigeria, United States and Viet Nam (CPI, 2023e).

According to the Landscape of Methane Abatement Finance (CPI, 2023e), methane abatement finance averaged USD 13.7 billion in 2021 and 2022. This is significantly lower than the annual increase needed by 2030, estimated at USD 48 billion, a 3.5-fold increase from current levels.

Three sectors alone account for 95 per cent of human-caused methane emissions: AFOLU (40 per cent); fossil fuels (35 per cent), encompassing coal, oil, and natural gas; and waste (20 per cent), including both solid waste and wastewater (UNEP and CCAC, 2021). However, each of these sectors is receiving significantly less than their justified potential for methane abatement. Fossil fuel received less than 1 per cent of the total tracked finance. In contrast, the AFOLU sector attracted 55 per cent of the total flows, primarily driven by a surge in manure-to-energy activities. Yet, its financial needs are more than double the current inflow. Similarly, the waste sector accounted for 45 per cent of the financing (USD 6.1 billion), which is still far below its required USD 20.4 billion per year until 2030. The role of private sources (corporations and commercial FIs) is noteworthy, contributing 70 per cent of the funding, especially in the AFOLU sector. Public actors played a significant role (30 per cent), especially in the waste sector.

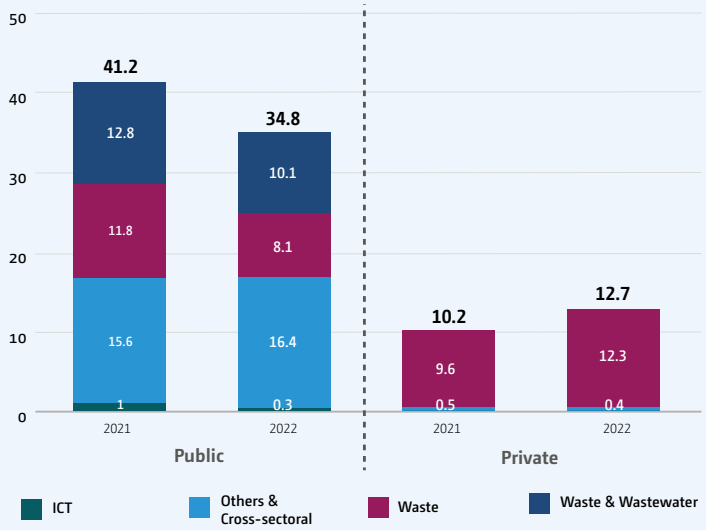
Geographically, the top three regions benefiting from methane abatement finance are East Asia and the Pacific, the United States and Canada, and Western Europe. Regions such as Latin America and South Asia received disproportionately lower financial support compared with their methane emission levels. The dominant financial instrument is debt (57 per cent), followed by equity (40 per cent). Grants, though only a small fraction (2 per cent) of the total, are crucial as they offer significant catalytic potential for accelerating methane abatement finance. In the backdrop of low grant funding, over USD 1 billion in new grant funding was announced by the GMP partners at COP28 (EC, 2023).

2.2.7. Investments in climate mitigation in other sectors

174. Mitigation investment in other sectors and cross-sectoral activities was estimated at USD 49 billion on average in 2021–2022. These include investments in health, education, biodiversity, land and marine conservation, disaster risk management, public resource management, the financial sector, tourism and trade areas, among others. Twenty-one per cent of these cross-sectoral investments went to projects targeted to provide policy and national budget support and capacity building. Other mitigation expenditures were directed at the waste and water sectors and averaged around USD 67 billion in 2021–2022.

Figure 2.7

Estimates of global mitigation investment in other sectors, 2021–2022 (billions of United States dollars)



2.2.8. Investments in climate adaptation and resilience

175. Tracked adaptation finance reached USD 55 billion and USD 71 billion in 2021 and 2022, respectively (CPI 2023, CPI 2024). A 28 per cent average increase with respect to 2019–2020 was mainly driven by bilateral and multilateral DFIs. National DFIs and multilateral DFIs remain the main investors in climate adaptation financing, at 42 and 34 per cent of the total, respectively. About 49 per cent of adaptation finance was spent in the water and wastewater sector, followed by cross-sector measures (36 per cent) such as disaster-risk management and policy and national budget support and capacity-building, with the remaining in AFOLU (11 per cent) and transport (2 per cent). Regarding the geographical distribution, East Asia and the Pacific received 45 per cent, followed by sub-Saharan Africa (17 per cent). All other regions received, on average, less than 10 per cent of total flows.

176. According to CPI and GCA (CPI and GCA, 2023), globally, market-based debt is currently the most common instrument used to mobilize adaptation finance accounting for 59 per cent of average annual adaptation flows (USD 37.5 billion). This represents an increase from 2019–2020 when project-level market rate debt accounted for USD 24.2 billion (or 46 per cent). The volume of concessional finance flowing to adaptation increased only modestly, while its proportion relative to other financial sources diminished between 2019–2020 and 2021–2022. In 2019–2020, grants accounted for about 19 per cent of total utilization, and low-cost debt was at 24 per cent; these figures dropped to 17 and 21 per cent in 2021–2022, respectively.

177. Africa received USD 13 billion on average in tracked adaptation finance in 2021 and 2022, a 14 per cent increase compared with 2019–2020. Tracked adaptation finance was approximately 36 per cent of total tracked climate finance to Africa in 2021-2022, a slight decrease in proportional terms from 39 per cent in 2019-2020. The share of adaptation finance continues to be higher in Africa than any other region. In contrast, 13 and 12 per cent of total climate finance to South Asia and Latin America and the Caribbean respectively, was directed to adaptation activities in 2021–2022 (CPI and GCA, 2023).

178. Despite the critical importance of tracking adaptation finance, significant data and reporting barriers limit the ability to capture global flows, private capital in particular. Therefore, the reported values are likely to underestimate actual flows. The lack of data on private adaptation finance yields significant uncertainty regarding progress on addressing climate vulnerabilities and leaves public and private decision makers without critical information on where they should target existing and additional investments. Identifying whether an investment has adaptation outcomes is particularly challenging as it depends on regional or local vulnerabilities assessments; the more vulnerable the region and the sector, the more impactful an investment is likely to be. Progress has been made in recent years to advance tracking approaches to improve

identification of investment with adaptation outcomes form the private sector – even in cases where investors do not proactively identify that investment as adaptation. Notably, work in 2024 to expand private tracking via methodological advances and machine learning model development have yielded a modest expansion in tracked private finance to USD 4.7 billion on average annually in adaptation-relevant project-level flows from asset managers, commercial financial institutions, consumers and households and corporations (CPI 2024c). The lack of impact metrics and reporting requirements, along with data confidentiality, limit adaptation investment tracking for both private and public actors. Some countries have enacted regulations that make certain aspects of sustainability reporting mandatory, while others encourage voluntary reporting through frameworks such as CDP, the Sustainability Accounting Standards Board, the ISSB, and the Global Reporting Initiative. However, where reporting remains voluntary, the availability of comprehensive and consistent data can be limited.

2.2.9. Non-primary climate finance flows

179. Non-primary climate finance flows are not captured in global finance estimates as they do not result directly in emission reductions or increases in adaptation and resilience. Including such investments in global climate finance figures (chapter 2.2.1) could potentially lead to double counting, given that these investments are either already captured through existing investment (e.g. carbon markets, investment in manufacturing capacity, research and development) or will be capitalized and incorporated into the financial amounts of new projects in the future (e.g. use of proceeds from green bond issuance, venture capital/private equity). Nevertheless, these flows have been experiencing active growth over the years and could hold significance as a leading indicator for primary finance flows in subsequent years. This section provides an overview of trends associated with non-primary climate finance flows, including green bonds, sustainability-linked loans/bonds, venture capital, private equity, investments in manufacturing, mergers and acquisitions, research and development, and carbon markets.

180. The World Bank (World Bank, 2023c)reported that global revenues from carbon markets increased almost ninefold in the past decade and doubled from 2019, generating approximately USD 84 billion and USD 95 billion in 2021 and 2022 respectively. This indicates that an increasing number of governments have recognized carbon pricing as an effective method to integrate the costs of climate change into economic decision-making, thereby encouraging climate action. On the other hand, the value of the voluntary carbon market has also surged from USD 136 million in 2017 to USD 2 billion in 2022 (Ecosystem Marketplace, 2023). Credits connected to nature-based solutions were a primary driver of this market growth (Ecosystem Marketplace, 2023) Scaling up and enhancing the use of regulatory instruments can improve mitigation outcomes in sectoral applications, consistent with national circumstances. Where implemented, carbon pricing instruments have incentivized low-cost emissions reduction measures but have been less effective, on their own and at prevailing prices during the assessment period, to promote the higher-cost measures necessary for further reductions. Equity and distributional impacts of such carbon pricing instruments (e.g. carbon taxes and emissions trading) can be addressed by using revenue to support low-income households, among other approaches. Revenue from carbon credits represents an outcome-based form of climate finance that rewards projects for the climate benefits they produce. Such revenues could become a source for driving innovative solutions, directing financial flows towards sector-specific transition plans, and channelling significant private capital into emerging markets and developing economies (World Bank, 2023c).

181. The green bond market has seen a significant boost in the past decade, with a cumulative USD 2.5 trillion issued between 2012 and 2022. In 2012, the annual issuance of green bonds was USD 2 billion, increasing substantially to USD 582 billion and USD 487 billion in 2021 and 2022 respectively (CBI, 2023a). While BNEF (BNEF, 2024) estimates for 2022 are significantly higher, approximately USD 581 billion, this discrepancy is attributed to variations in definitions, methodologies and data revisions. Additionally, CBI has reported that green loans priced in 2022 amounted to USD 10.4 billion, constituting 2 per cent of the global loan market. According to CBI (2023) and BNEF (2024), two-thirds (67 percent) of the green bonds issued in 2022 originated from developed economies, notably the EU (USD 303 billion) and the United States (USD 66 billion), with 23 percent emanating from emerging markets (mainly China at USD 94 billion) (see figure 2.8). While financial bond issuers may not always publicly disclose the use of proceeds, the allocation of a significant portion of green bonds towards debt refinancing or existing projects sends a strong market signal that governments globally are intensifying their climate ambitions. Consequently, more capital is being allocated towards enhancing renewable energy capacity and developing nascent technologies, such as green hydrogen (CBI, 2023).

Figure 2.8

Global green bond issuance 2021–2022 (billions of United States dollars)

Source: CBI (2023) and BNEF (2024)

182. IEA has tracked spending trends by energy technology in IEA member States since 1974 through the Energy Technology Research, Development, and Demonstration Budgets database (IEA, 2024a). In 2021 and 2022, IEA monitored flows of USD 23.7 billion and USD 24.7 billion respectively, to public research, development and demonstration in low-carbon energy, with a 6 per cent average growth rate over the past five years. These flows provide insights into how policymakers formulate policies to influence clean energy innovation, as they have become progressively more diverse. Nuclear power continued to decline, reaching 20 percent in 2022, while budgets for both energy efficiency and renewables expanded significantly faster during the 1990s and 2000s, increasing from 7 per cent each in 1990 to 22 per cent each in 2010. Since then, the share of energy efficiency has risen to reach 24 per cent, while the share of renewables has declined to 13 per cent. This indicates the maturation of certain renewable technologies, leading to a perceived lesser need for research, development and demonstration investment as these technologies become more market-ready and as private sector investments assume a more significant role.

183. IEA (IEA, 2023d) reports that the global cumulative investment in the mass manufacturing of selected clean energy technologies between 2022 and 2030 amounts to approximately USD 470 billion`. A significant portion of this investment is concentrated in China, Europe, and North America. Furthermore, the announced global cumulative investment in large-scale, site-specific clean energy technologies is estimated to be around USD 260 billion over the same period. Although these technologies, especially the large-scale, site-specific clean energy technologies, may not be fully commercialized yet, the rapid expansion in clean technology manufacturing is poised to create new investments in the near future.

184. According to BNEF (2024), USD 3.6 billion was directed toward renewable energy acquisitions and refinancing for both 2021 and 2022. Of this, 67 per cent (USD 2.4 billion) was allocated through asset financing, 29 per cent through mergers and acquisitions, and the remaining 5 per cent through private equity buyouts.

185. Additionally, there is an increasing trend in investments toward climate-technology companies. BNEF's database on climate-technology venture capital/private equity investment indicates that USD 58.9 billion was invested in climate-technology ventures via venture capital and private equity across 1,182 deals in 2022. A significant portion of these transactions focused on the transport and energy sectors, with 40 per cent of the financing flowing into the transport sector and 37 per cent into the energy sector.

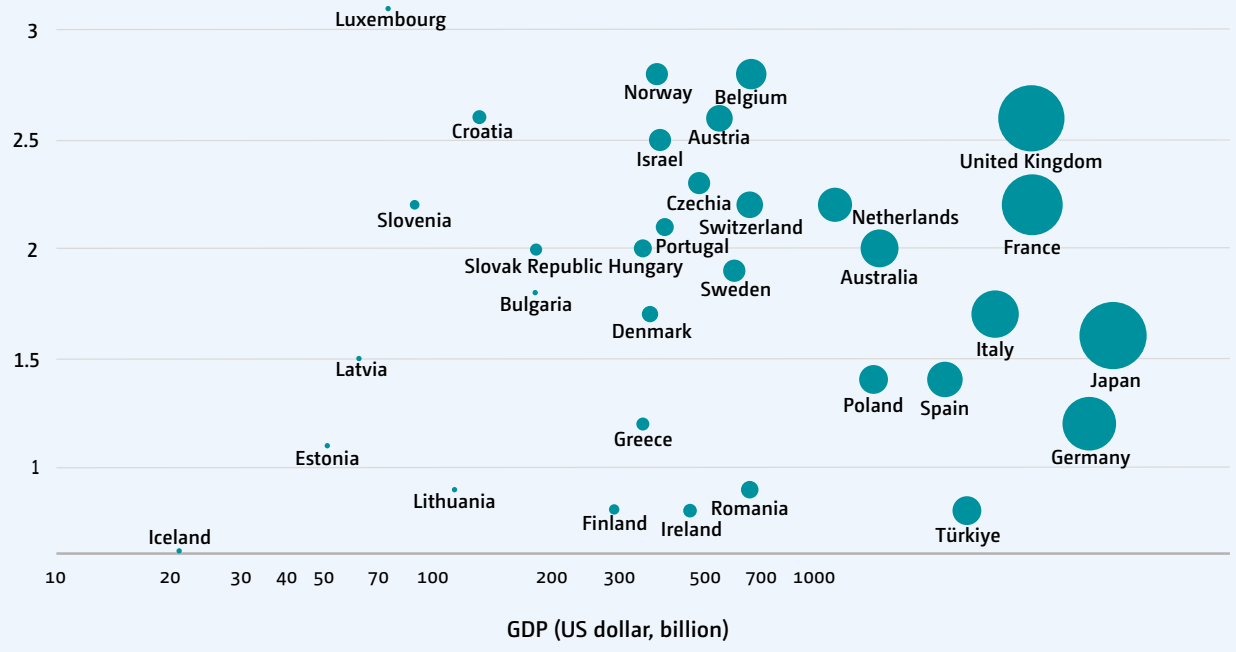
2.3. Domestic public climate finance

186. Data on national and subnational governments remains limited. This is largely attributed to inconsistent definitions and criteria to define climate finance, including adaptation, limited technical and institutional capacity, a lack of unified and systematized information, and limited access to national climate scenarios and projections, etc.

187. The OECD Subnational Government Climate Finance Database (OECD, 2024d),[45] which covers data for 33 OECD and EU countries from 2001 to 2019, aims to better understand the scale of subnational governments' financial role and to identify financial gaps. According to the database, USD 595 billion was allocated to climate-significant expenditures across various sectors in 2019, with subnational governments accounting for 63 percent (USD 373 billion). This shows the substantial contribution of subnational governments to the climate action in the light of global, national, and subnational climate objectives. An average of 1.8 per cent (weighted 0.4 per cent) of GDP across these nations is directed towards climate-related expenditures, signalling a relatively low economic engagement. Countries such as France, Japan, and the United Kingdom appear to spend more in absolute terms compared with their GDP, whereas others, despite having smaller economies, are making notable contributions to climate finance (figure 2.9).-

Figure 2.9

Subnational government climate significant expenditure relative to gross domestic product
Climate significant expenditure/GDP (per cent)



NB: The size of the dot represents the amount of climate-significant expenditure.

Source: OECD Subnational Government Climate Finance Database

Note: climate-significant expenditure includes both current expenditure and capital expenditure. Current expenditure consists of staff expenditures, intermediate consumption, non-capital subsidies, and tax expenditure. Capital expenditure encompass both direct (capital transfers and capital subsidies) and indirect (gross fixed capital formation minus disposals of non-financial, non-produced assets) investment. Climate-significant investment is a subset of expenditure, which corresponds to direct investment.

45) The database provides data on subnational public climate-significant expenditure and investment directed towards the economic activities the EU Technical Expert Group on Sustainable Finance (TEG) identified as significantly contributing to climate change adaptation and mitigation in their March 2020 report "Taxonomy: Final report of the Technical Expert Group on Sustainable Finance". Climate-significant expenditure covers both current and capital expenditure.

188. The lack of a comprehensive domestic budgetary climate tagging framework hampers the robust assessment of climate finance committed by domestic governments. However, progress has been made in establishing tracking frameworks and methodologies in countries including Colombia, Ecuador, Ethiopia, France and Indonesia. For example, Ethiopia's Government is developing a climate-related expenditure tagging and tracking system, which had a pilot phase in 2022 (IIED, 2022). Additionally, Chile's Ministry of Environment has been actively monitoring public expenditures on climate finance, including allocations for COVID-19 relief, demonstrating the integration of environmental and public health financing. Annex F provides estimates of domestic public expenditure data compiled, on a best effort basis, from various sources, including, but not limited to, from the national budget tagging exercises conducted by countries, CPEIRs, and other domestic landscape exercise. Data are also retroactively updated for previous years wherever information becomes available. Annualized estimates for 2021 and 2022 amounted to USD 195 billion from eight countries and the European Commission. The increase compared with 2019–2020 (USD 102 billion) is primarily attributed to the budgets of developed countries including the EU, France and the United Kingdom.

Box 2.3

Urban climate finance

Cities face increasingly severe climate impacts and are responsible for 75 per cent of total CO2 emissions (Mukhim and Roberts, 2023). Cities must therefore be at the forefront of both mitigation and adaptation efforts, yet city governments still lack sufficient resources to respond to this growing emergency. The 2024 State of Cities Climate Finance report, produced by CCFLA, estimates that cities need USD 4.5 trillion invested annually by 2030 for mitigation alone and more than USD 6 trillion by 2050 to achieve the 1.5 °C (CCFLA, 2024). A lack of defined quantitative metrics for adaptation lead to underestimation of adaptation finance needs. Transport (40 per cent), buildings (23 per cent) and clean energy (27 per cent) are critical investment areas, cumulatively requiring 89 per cent of total mitigation investments. Regionally, East Asia and the Pacific (27 per cent), the United States and Canada (21 per cent), and Western Europe (12 per cent) will have the highest urban mitigation investment needs until 2030, accounting for more than 60 per cent of the total urban mitigation needs.

According to self-reported data disclosed by cities to CDP-ICLEI Track, representing 14per cent of the world's total urban population, the demand for climate finance in cities is increasing year-on-year (CDP, 2023). In 2023, 636 cities from 86 countries reported a total of 2,346 climate infrastructure projects, a 52per cent increase from 2021. 76 per cent of all projects included cost estimates, seeking USD 65 billion in investment. Waste and water management are the top sectors in the Global South, whereas buildings and energy efficiency and transport are the top sectors in the Global North.

City-level finance is increasing to close the gap as CCFLA estimates that urban climate finance averaged USD 831 billion in 2021/2022; adaptation finance flows continue to lag (CCFLA, 2024). This represents a 54per cent increase from 2019/2020 (USD 541 billion). Out of the total, USD 138 billion was tracked at the project level, while USD 693 billion was estimated through a top-down capital expenditure approach. Most of the estimated finance was in sustainable transport (51 per cent), followed by green building infrastructure and energy efficiency (29 per cent), and clean energy (18 per cent). This was split between public (49 per cent), public (22 per cent) and unknown (29 per cent). Regionally, East Asia and the Pacific (47 per cent) and Western Europe (26 per cent) received the highest amount of urban climate finance. Financing for urban adaptation projects was a mere USD 10 billion in 2021/2022; only 7 per cent of urban climate finance tracked at the project level and mainly into water and wastewater investments (68 per cent). While majority of this was in developing economies (USD 6 billion) but falls far short of the estimated urban adaptation need of at least USD 147 billion annually by 2030 in developing countries. Cities will need to invest in adaptation for river floods, coastal zone protection, infrastructure resilience, early warning and social protection, and health.

Urban climate finance remains hindered by a persistent lack of granular investment data from local government budgets. Despite their key role in achieving net zero, the exact size of the financial role played by subnational governments remains largely unknown. OECD estimates that subnational government accounted for 63 per cent of climate-significant public expenditure (1.1 per cent of GDP) and 69 per cent of climate-significant public investment (0.4 per cent of GDP), in 33 OECD and EU countries as of 2019 (OECD, 2022a). These figures, calculated using the National Accounts' Classification of the Functions of Government, are the first to offer a comprehensive comparison of public climate expenditures across countries. Further OECD research reveals that despite their key role in public investment, subnational government investment remains low in many regions, with a heavy reliance on grants for more than half of their revenue (51.5 per cent) (OECD, 2022b).

2.4. South—South cooperation on climate finance

189. This section captures data on climate finance flows available from voluntary reporting on development assistance to the OECD CRS by developing countries, flows from IDFC member institutions in non-OECD countries to other non-OECD countries, and MDB and climate fund financing that can be attributed to developing countries based on their shareholding.

190. A number of non-Annex I Parties, such as the Republic of Korea and the United Arab Emirates, report on their development assistance to the OECD CRS and the TOSSD reporting framework. The Republic of Korea reported USD 1.3 billion and USD 2.1 billion in 2021 and 2022 respectively (OECD, 2024).

191. According to the TOSSD report (2024), financial contributions from non-OECD countries to other non-OECD countries for addressing SDG 13, which focuses on climate action, amounted to USD 1 billion in 2021 and USD 4.2 billion in 2022 respectively. In both years, almost all the finance was for multiple SDGs, with SDG 13 being one of the targeted goals. This distribution pattern underscores the interconnected nature of climate action with other sustainable development objectives, such as clean water and sanitation (SDG 6) and affordable and clean energy (SDG 7). In 2021, 29 per cent of the financial flows was directed towards the energy sector, and 15 per cent supported water supply and sanitation initiatives. However, in 2022, these sectors received only 12 per cent and 0.2 per cent of the total funds respectively. More than one-third of the contributions in both years was allocated to general environmental protection and multisectoral projects, highlighting a comprehensive approach to sustainable development.

192. IDFC member institutions based in non-OECD countries committed USD 2 billion and USD 2.7 billion in 2021 and 2022 respectively to projects in other non-OECD countries, 42 per cent for mitigation projects and 58 per cent for adaptation projects (IDFC, 2023a). This represents a slight increase from 2020, when USD 0.5 billion was reported, with mitigation accounting for 90 per cent and adaptation accounting for10 per cent.

193. Several developing countries are shareholders of MDBs. Around 22-27 per cent of the climate finance provided by MDBs can be attributed to non-Annex II Parties, which amounts to USD 11.9-14.7 billion for 2021 and USD 18.3-21.3 billion for 2022 (AfDB et al., 2023). This averages to USD 13.3-19.8 billion for 2021/2022. MDBs such as the Islamic Development Bank increased its climate finance outflows 139 per cent on annual average of 2019-2020 to 2021-2022 to reach USD 867 million while New Development Bank reported climate finance outflows for the first time in 2022 amounting to USD 466 million

194. The GCF during its first replenishment (2020—2023), raised contributions from two non-Annex I Parties namely Indonesia (USD 0.5 million) and the Republic of Korea (USD 200 million). In addition, the GCF for its second replenishment, for the period between 2024 and 2027, received pledges from Israel (USD 0.1 million) and the Republic of Korea (USD 300 million) (GCF, 2024a).

195. According to CPI estimates, USD 20.1 billion was committed by and for countries in the Global South. The majority of South—South climate finance was committed by countries in Latin America and the Caribbean (USD 6.1 billion). USD 7.0 billion and USD 7.7 billion were invested in renewable energy and sustainable transport from non-Annex I countries in other non-Annex I countries in 2021 and 2022 respectively. Private actors contributed 14 per cent of the financial flows, investing USD 2.5 billion in renewable energy and USD 2.4 billion in the water and wastewater sectors.

196. Renewable energy investments from Chinese-based public and private FIs to other projects in other non-Annex I Parties averaged USD 0.6 billion per year in 2021—2022, out of which 67 per cent was in wind power, 18 per cent was in hydropower and the rest 15 per cent was in solar photovoltaic (WRI, 2023).

197. Furthermore, there are several examples of recent initiatives playing a crucial role in South-South cooperation not necessarily tracked in the aforementioned numbers. For example the Global Green Growth Institute's Africa and Middle East SAFE Initiative, announced in 2023, aims to mobilize at least USD 10 billion to implement proven climate-smart agricultural practices (AfDB, 2023). The Arab Coordination Group committed USD 24 billion in 2022 to help LDCs and SIDS accelerate their energy transition, increase the resilience of food, transport, water, and urban systems, and promote energy security (OPEC Fund, 2023a). In 2023, The Arab Coordination Group further committed USD 50 billion to support African countries to build resilient infrastructure and inclusive societies (OPEC Fund, 2023b). In 2021, Saudi Arabia committed USD 1 billion, as part of a USD 10.4 billion regional fund, to cut carbon emissions in the Middle East (KAPSARC, 2021). In 2023, Saudi Arabia pledged an initial USD 50 million to start

seeding the Pacific Resilience Facility, a facility targeted to build resilience against disaster in the region (Pacific Islands Forum, 2023). Furthermore, in 2023 Pakistan secured commitments from Saudi Arabia (USD 1 billion) and China (USD 100 million) for flood rehabilitation and reconstruction (Business Recorder, 2023).

Table 2.5

Estimated South–South climate finance flows, 2017–2022 (billions of United States dollars)

	2017	2018	2019	2020	2021	2022
Bilateral flows						
BTRs: finance provided through bilateral and multilateral channels	0.3	-	1.5	-	-	-
Non-DAC members to ODA eligible countries	0.3	0.2	0.1	0.0	1.3	2.2
IDFC non-OECD based member institutions to non-OECD countries	5.9	4.1	1.7	2.2	2.0	2.7
Multilateral flows						
GCF – confirmed pledges from non-Annex I Parties	-	-	0.2	-	0.3	–
MDB attributed financing from non-Annex II Parties[a]	7.8-8.0	10.2-10.4	12.0-12.6	9.3-13.2	11.9-14.7	18.3-21.3
New Development Bank	0.3	0.6	-	-	-	0.5
Private finance						
CPI 2023, CPI 2024	3.5	2.9	3.8	2.0	3.4	4.0

[a]This includes financing from AfDB, ADB, AIIB, EBRD, EIB, IDBG, ISDB and World Bank Group.

2.5. Climate finance flows from developed to developing countries

198. This section provides information on public and private climate finance flows from developed to developing countries for 2021 and 2022. Data on the flows of public climate finance are of higher quality and consistency as international public climate finance is periodically 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 commercial banks or international investors in the form of FDI. However, such private finance flows often do not have the level of granularity required to understand whether the financing is related to climate change mitigation or adaptation activities or whether they originate in a developed country. To avoid overlaps, no aggregation is made across channels and data sources.

199. 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.

2.5.1. Bilateral flows

200. This section provides information on bilateral climate flows in 2021—2022 from several sources. These are preliminary data on financial support reported by Parties through bilateral, regional and other channels, and multilateral channels; bilateral assistance reported by OECD DAC members;[46] bilateral flows from OECD-based IDFC member institutions to non-OECD countries; and climate-related officially supported export credits from the OECD Export Credit Group statistics.

201. The BTRs are due to be submitted by the end of 2024. To support the preparation of the sixth BA, Parties were invited to provide preliminary estimates for climate finance provided, mobilized and received in 2021—2022. Fifteen Parties provided preliminary estimates and

46) When reporting to the UNFCCC on climate finance in their BRs, many 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 chapter 1.2.1 above).

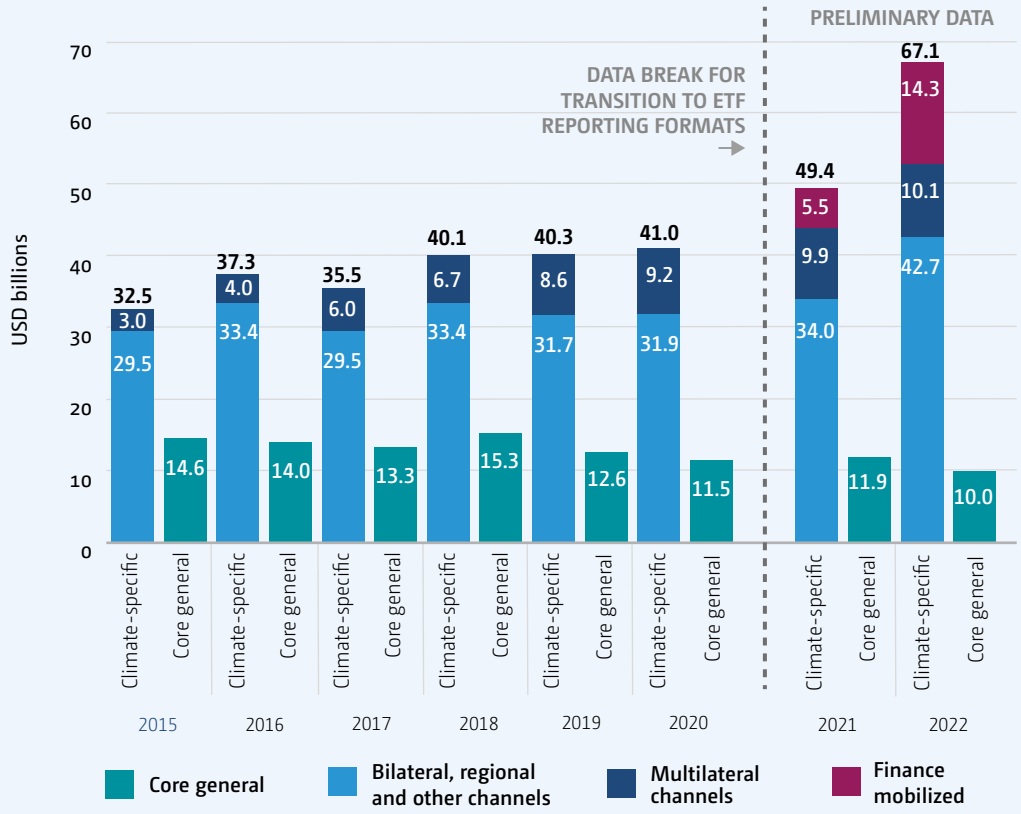
publicly available data were gathered for a further eight Parties. It is important to note that the preliminary data published in this report are subject to change after the official submissions are made at the end of 2024.

202. Climate specific financial support stood at USD 49.4 billion and USD 67.1 billion in 2021 and 2022 respectively, averaging USD 58.3 billion annually (figure 2.10). This is an increase of 43 per cent compared with the annual average of USD 40.7 billion in 2019–2020.

Climate-specific finance delivered through bilateral, regional and other channels represented 66 per cent of the total climate-specific finance. Finance delivered through multilateral channels, which generally consist of contributions or inflows to multilateral climate funds and multilateral FIs stood at 18 per cent, while 16 per cent was finance mobilized through other channels, which is due to be reported for the first time in the BTRs as a separate category.

Figure 2.10

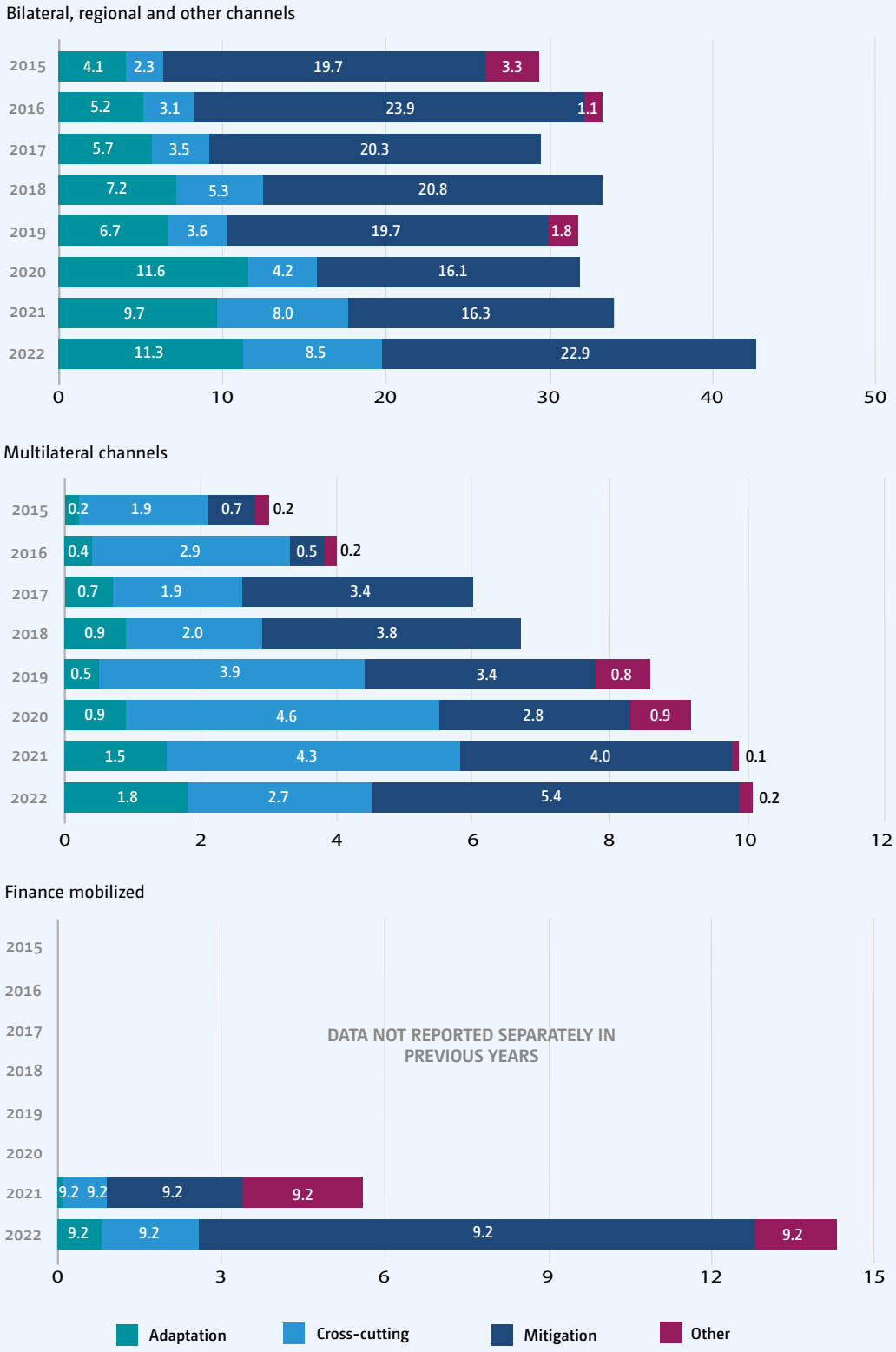
Climate-specific financial support provided as reported by Annex II Parties, 2015–2020 and preliminary estimates for 2021—2022



Note: data are preliminary, partial and provisional and subject to change once official data are submitted by the end of 2024.

Figure 2.11

Climate-specific financial support provided through different channels by uses, as reported by Annex II Parties, 2015–2022



203. Climate-specific financial support through bilateral channels increased by 21 per cent, from USD 31.8 billion in 2019–2020 to USD 38.4 billion in 2021–2022. Mitigation finance continued to account for the largest share, representing 51 percent of the annual average for 2021-2022, despite a decrease from 56 per cent in 2019–2020. Finance for cross-cutting activities which contribute to both adaptation and mitigation objectives almost doubled its share, to 22 per cent in 2021–2022, compared with 12 percent in 2019–2020. Meanwhile, finance for adaptation decreased by 1 per cent, with a share of 28 per cent in 2021–2022. Opposite trends were observed for finance delivered through multilateral channels. Mitigation finance increased to 47 per cent (from 35 per cent in 2019–2020), while cross-cutting finance decreased to 35 per cent (from 48 per cent) and adaptation finance doubled to 16 per cent (from 8 per cent). Preliminary data also reported include core general contributions of USD 11.0 billion on average in 2021–2022 that Parties are unable to confirm as climate-specific (USD 12 billion in 2019–2020).

204. Table 2.6 shows the total bilateral climate-related development finance reported by OECD DAC members for projects with climate change mitigation and adaptation objectives. As mentioned in chapter 1.2.1 above, these data are based on the Rio markers and are not downscaled to climate-specific components, nor were any country-level coefficients applied to estimate the climate-related share of the total project budget. Bilateral assistance from OECD DAC members increased in 2022, averaging USD 44.4 billion in 2021 and 2022, despite a decrease in 2021, primarily due to the COVID-19 pandemic. This represents a 17 per cent increase compared to with the 2019–2020 average of USD 37.9 billion.

Table 2.6

Bilateral assistance reported by Development Assistance Committee of the Organisation for Economic Co-operation and Development members for climate change mitigation- and adaptation-related projects, 2011–2022 (billions of United States dollars)

Year	Mitigation		Adaptation		Overlap[a]		Total		
	Principal	Significant	Principal	Significant	Principal	Significant	Principal	Significant	Principal + Significant
2011	7.7	4.7	2.0	5.9	1.3	2.3	8.5	8.4	**16.8**
2012	9.6	5.0	2.7	7.1	1.8	2.3	10.5	9.8	**20.3**
2013	10.5	5.5	3.4	7.2	1.6	2.5	12.2	10.2	**22.4**
2014	12.1	5.7	3.7	8.0	1.9	3.2	13.9	10.5	**24.4**
2015	10.0	11.5	3.8	12.6	2.0	4.7	11.8	19.4	**31.2**
2016	9.5	14.8	4.7	11.2	2.7	4.1	11.5	21.9	**33.4**
2017	9.3	12.5	5.6	13.7	3.5	5.1	11.3	21.1	**32.5**
2018	7.8	16.7	3.3	13.2	2.3	6.0	8.9	23.9	**32.8**
2019	9.1	14.6	5.3	15.0	2.7	5.5	11.7	24.1	**35.8**
2020	11.1	14.5	5.8	23.7	4.1	6.8	12.8	31.4	**44.2**
2021	10.0	11.4	5.5	17.3	2.3	6.7	13.3	22.0	**35.3**
2022	19.2	18.6	7.6	25.3	4.4	12.9	22.5	31.0	**53.5**

Source: Authors' analysis based on OECD DAC CRS statistics

Note: Australia, Austria, Belgium, Canada, Czechia, Denmark, Estonia, EU institutions (excluding EIB), Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands (Kingdom of the), New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States are included in this analysis.

[a] 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

205. Other bilateral flows include financial commitments for bilateral DFIs and export credit agencies. According to IDFC, bilateral climate finance flows from OECD-based institutions to projects in non-OECD countries decreased from an annual average of USD 20 billion in 2019—2020 to USD 18 billion in 2021—2022 (IDFC, 2023). The decrease was mainly in 2021, due to the COVID-19 pandemic, followed by a rebound in 2022. No data is available on the share of concessional and non-concessional finance within these flows. Mitigation finance continued representing 60 per cent of the finance, and adaptation finance and cross-cutting finance were evenly distributed, each at USD 5 billion or around 20 per cent in 2022.

2.5.2. Multilateral flows

Multilateral climate funds

206. Multilateral climate funds include flows reported by the operating entities of the Financial Mechanism of the Convention which also serve the Paris Agreement (GCF and GEF), funds serving the Convention and the Paris Agreement (LDCF and SCCF), a fund established under the Kyoto Protocol and also serving the Paris Agreement (AF), and other multilateral climate funds including those operating under the CIF. The CIF is administered by the World Bank and comprises two funds, namely CTF and the SCF. The latter serves as an overarching framework for three programmes: PPCR, FIP and SREP. MDBs include AfDB, ADB, AIIB, Council of Europe Development Bank, EBRD, EIB, IDBG, IsDB, NDB and World Bank Group. The IMF formally established its new Resilience and Sustainability Trust in April 2022 and its committed funds in 2022 are included

207. Parties reached an agreement on the operationalization of the Fund for responding to Loss and Damage at COP. The Fund for responding to Loss and Damage Fund has received announced pledges totalling USD 661.4 million from 19 countries, as communicated by the COP 28 Presidency (UNFCCC, 2023a).

208. Table 2.7 provides an overview of commitments approved by all multilateral climate funds to climate projects. The funds 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. Multilateral climate funds committed USD 4.1 billion in 2021 and USD 3.3 billion in 2022. The annual average (USD 3.71 billion) remains similar to the 2019–2020 average (USD 3.66 billion), driven mainly due to the addition of IMF's Resilience and Sustainability Trust despite depletion of commitment capacity in certain funds, such as the GCF. Together, the GCF, GEF, AF, LDCF, and SCCF committed USD 3.3 billion in 2021 and USD 1.7 billion in 2022 to climate projects. However, the financing from multilateral climate funds is expected to rise further as they receive new replenishments.

209. Based on ownership shares, USD 4.2 billion and USD 3.4 billion in multilateral climate fund flows were attributable as flows from developed to developing countries in 2021 and 2022 respectively (OECD, 2024). The OECD numbers and CFU data (used in table 2.7) broadly align. The minor differences are mainly due to CFU data not attributing flows from developed to developing countries, based on fund ownership, and CFU data capture project-level information of approved projects by different funds, which provides more granularity and hence used in the table 2.7.

Table 2.7

Overview of commitments to projects approved during 2015–2022 by multilateral climate funds (millions of United States dollars)

	2017	2018	2019	2020	2021	2022
Adaptation Funds	**653.5**	**522.8**	**612.4**	**607.0**	**933.0**	**281.0**
Adaptation for Smallholder Agriculture Programme	4.3	-	4.0	-	3.5	-
AF	84.9	69.1	188.9	57.1	93.1	126.0
Global Climate Change Alliance	60.7	24.6	28.9	74.4	-	-
GEF7	-	-	74.4	77.8	-	-
GCF-1 and GCF IRM	314.1	331.2	198.0	313.3	726.6	59.3
LDCF	157.3	72.6	116.3	81.6	80.7	75.9
PPCR	31.2	24.2	-	0.8	26.7	18.9
SCCF	1.0	1.1	2.0	2.1	2.5	0.9
Mitigation Funds	**855.9**	**1,265.0**	**774.8**	**1,629.7**	**1794.8**	**583.7**
CTF	305.4	396.1	457.6	478.6	299.1	93.7
GEF6	65.4	73.9	1.8	-	-	-
GEF7	-	-	24.7	133.4	122.7	50.6
GCF-1 and initial resource mobilization period	290.7	698.3	236.1	1,006.9	1,369.3	428.4
Partnership for Market Readiness	9.5	3.0	-	-	-	-
SREP	184.8	93.8	54.7	10.9	3.7	11.1
REDD+ funds	**184.8**	**267.5**	**257.8**	**308.6**	**101.7**	**111.1**
Amazon Fund	71.0	106.9	-	-	-	-
BioCarbon Fund Initiative for Sustainable Forest Landscapes	8.0	45.0	-	-	-	-
Central African Forest Initiative	0.3	18.4	0.3	6.2	42.2	40.7
Forest Carbon Partnership Facility Readiness Fund	3.6	2.0	-	-	-	-
FIP	88.7	61.9	27.2	34.3	39.2	70.4
Global Climate Change Alliance	-	10.8	-	-	-	-
GEF6	8.8	18.4	-	-	-	-
GEF7	-	-	1.7	268.1	-	-
GCF-1 and initial resource mobilization period	-	-	228.6	-	-	-
United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries	4.3	4.1	-	-	20.3	-
Multiple-objective funds	**380.1**	**1,142.2**	**1,884.2**	**1,236.2**	**1,287.7**	**2,323.1**
Global Climate Change Alliance	64.2	46.9	119.8	-	-	-
GEF6, GEF7, and GEF8	77.2	164.5	713.2	382.2	80.3	69.6
GCF-1 and initial resource mobilization period	238.7	930.8	433.7	526.9	861.3	933.0
International Fund for Agricultural Development	-	-	605.0	327.1	346.1	257.3
IMF Resilience and Sustainability Trust	-	-	-	-	-	1063.21
LDCF	-	-	12.5	-	-	-
Total multilateral funds	**2,074.3**	**3,197.4**	**3,529.2**	**3,781.5**	**4,117.2**	**3,299.0**
UNFCCC funds (GCF, GEF. AF, LDCF, and SCCF)	**1,238.1**	**2,359.9**	**2,231.9**	**2,849.4**	**3,336.4**	**1,743.7**

Source: CFU (2024) IMF's Resilience and Sustainability Trust numbers are taken from OECD (2024).

Notes: amounts may not sum to the total because of rounding. The numbers are updated for the previous year; The year refers to the fund's fiscal year ending during the specified calendar year.

210. In terms of inflows to the funds, the GCF in its first replenishment period, conducted in 2019, received announced pledges of USD 10 billion from 32 countries and two regions, with USD 9.99 billion confirmed as at 2024 (GCF, 2024a). In the second replenishment period, conducted in 2023, for the programming period between 2024 and 2027, the GCF received USD 12.7 billion in announced pledges from 32 countries, an increase of 27 per cent from the first replenishment. As at December 2023, USD 3.9 billion has been confirmed (GCF, 2024a).

211. Twenty-nine governments have committed to a total of USD 5.33 billion in pledges for the GEF-8 period from 2022 to 2026, reflecting a more than 30 per cent increase from the GEF-7 funding. This boost underscores a strong global push to achieve nature and climate targets. Of the USD 5.33 billion, 36 per cent (USD1.92 billion) is designated for biodiversity goals, 16 per cent (USD 0.85 billion) for climate change mitigation, 11.6 per cent (USD 0.62 billion) for land degradation, 15 per cent (USD 0.80 billion) for chemicals and waste management, and 10.6 per cent (USD 0.57 billion) for the protection of international waters (GEF, 2023a).

212. The LDCF, SCCF, and AF raise funds annually, rather than through replenishment cycles. In 2023, the LDCF received USD 141.74 million from six countries (Belgium, France, Germany, Norway, Spain and Sweden). The SCCF garnered USD 32.5 million in new pledges from three countries (Canada, Spain and the United Kingdom). These new pledges represent a 65 percent increase compared to the previous year's pledges (GEF, 2023b).

Multilateral development banks

213. According to MDBs' joint annual reports, MDBs committed USD 50.7 billion and USD 60.7 billion in climate finance in developing and emerging economies in 2021 and 2022 respectively (AfDB et al., 2023), from MDB's own accounts and MDB-managed external resources. The annual average of USD 55.7 billion represents a 21 per cent increase compared with 2019—2020 (USD 45.9 billion). A variety of approaches may be used to estimate the attribution of MDBs' climate finance to developing countries.

214. Two different approaches are applied to arrive at estimates of MDB's climate finance to developed countries. The first approach is based on the ownership shares held by developed countries in each MDB (CPI, 2019a), resulting in a weighted average share of 78 per cent for 2021—2022. The second approach is based on the most recent and historical replenishments in different funding round participation by individual countries and, where applicable, the institutions' capacity to raise funds from the capital (OECD, 2024a), resulting in an aggregate share of 73 per cent of finance to developing countries attributed to developed countries. As shown in table 2.8, the attributed share has broadly remained between 70 and 79 per cent since 2018.

215. The two aforementioned approaches were applied separately to obtain the estimates of the MDB outflows to developing countries attributed to developed countries, presented in table 2.8. MDB outflows to developing countries are estimated to range between USD 37.4 billion and USD 40.6 billion, on average, between 2021 and 2022, depending on the approach applied. The remainder of the climate finance committed to non-Annex I Parties by MDBs is treated as South–South climate finance.

Table 2.8

Climate finance commitments by multilateral development banks from their own resources that are attributable to developed countries

	Approach based on ownership shares held by developed countries in each MDB					Approach based on share of paid-in capital and callable capital (mobilization effect) of each MDB [b]		
	Total climate finance outflows reported by MDBs from own resources	Less commitments to Annex 1 Parties [a]	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 [c]	Share of total outflows
2013	20.8	-3.3	17.5	11.9	65%	15.7	13.0	83%
2014	25.7	-6.3	19.5	12.7	65%	21.0	18.0	86%
2015	23.4	-3.0 [c]	20.4	15.7	77%	19.1	14.4	75%
2016	25.8	-2.6	23.2	17.3	74%	22.3	15.7	70%
2017	34.1	-3.4 [e]	30.7	23.3	76%	36.4	23.8	65%
2018	41.5	-3.1 [e]	38.4	28.0	73%	33.7	26.7	79%
2019	45.8 [d]	-3.9	41.9	29.3	70%	42.5	30.5	72%
2020	42.7 [d]	-5.1	37.5	28.2	75%	46.4	33.2	72%
2019	50.7 [e]	-2.0	48.7	34.05	79%	46.2	34.3	74%
2020	64.6 [e]	-2.5	62.1	40.83	77%	65.2	46.9	72%

Source: authors analysis based on MDB joint reports, OECD (2024), CPI (2023),

[a] Commitments of MDB resources to Annex I Parties, in particular EU member States. See previous BAs for details on years before 2019.

[b] 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 with 90 per cent for paid-in capital.

[c] 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 2017–2020, 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.

[d] For 2019–2020, the proportion of each MDBs own resources to total climate finance in Table 4 in AfDB et al., 2020, 2021 (both developed and developing countries) is applied to the total for each MDBs climate finance to emerging economies and developing countries (Figure A.F.1 in AfDB et al., 2020, 2021).

[e] To make the two approaches comparable by covering the same institutions, CPI estimates for 2021 and 2022 included the Black Sea Trade and Development Bank, Caribbean Development Bank, Central American Bank for Economic Integration, Development Bank of Latin America, International Investment Bank, North American Development Bank, and Private Infrastructure Development Group.

2.5.3. Recipient perspective on climate finance flows

216. 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 the end-users. However, there is a lack of comprehensive information on the recipient entities of climate finance in the data on climate-related spending. This section sheds light on available information on the recipients of international public climate finance from the BURs, MDBs' annual reports and reporting from OECD DAC members.

217. Non-Annex I Parties continue to submit their BURs. Of the 104 Parties that have submitted BURs, 20 included information on climate finance received in 2021 or 2022. USD 1.135 billion was reported as either committed or received for projects starting in 2021 and USD 1.283 billion for projects starting in 2018. The reported support received was derived from various international sources, including bilateral and multilateral channels. Some non-Annex I Parties reporting financial information include details on co-financing for project committed under climate funds such as the GEF, GCF and AF. Some Parties, such as Guyana and Argentina also reported information on the support received from other Non-Annex I Parties while South Africa provided information on climate finance action financed from domestic source whereas some Parties listed of projects under the support received section of the BUR without specifying the implementation cost of the project. Owing to the time lag in data availability, and the varying levels of the information reported, it remains challenging to provide a comprehensive update on the finance received by Non-Annex I Parties (see annex C for further information).

218. The channels of delivery have broadly remained the same for bilateral assistance over the last several years. OECD provides information on the channel of delivery of bilateral assistance like public sector institutions including governments, private and non-governmental entities in recipient countries, amongst others. On average, 58 per cent of bilateral climate-relate assistance in 2021 and 2022 transacted through public sector institutions (like central and local, public corporations and other public entities in donor/recipient country). This was followed by multilateral organizations (12 per cent), NGOs (10 per cent) and UN entities (7 per cent) and private sector institutions (6 per cent).

219. MDBs report on the nature of recipients or borrowers of MDB climate finance differentiating between public and private, with "public recipients" defined as organizations where at least 50 per cent of the stakes or shares are publicly owned. Of the total climate finance committed by MDBs from their own resources, public and private recipient/borrower split was 80 per cent and 20 per cent in 2021 and 2022, on average. The share of public sector recipients has increase compared to 71–74 per cent observed between 2015 and 2020.

2.5.4. Private finance flows from developed to developing countries

Private finance mobilized by official development finance interventions through bilateral channels

220. After stagnating at between USD 4 and 6 billion between 2016 and 2021, private finance mobilized by bilateral providers increased to USD 9.2 billion in 2022. Although it is not possible to identify specific explanatory factors at an aggregate level, this increase is likely due to both the significant growth in public climate finance between 2021 and 2022 and some improvements in the effectiveness of this public finance in attracting private finance (OECD, 2024). Various mechanisms were relied upon by bilateral finance providers; direct investments in companies and special purpose vehicles (30 per cent), guarantees (21 per cent), credit lines (16 per cent), simple cofinancing (12 per cent), shares in collective investment vehicles (11 per cent) and syndicated loans (10 per cent).

221. Since 2014, IDFC members have included private sector mobilization, but comprehensive estimates remain challenging due to varied methodologies and inconsistent reporting among members. However, IDFC does not report the sources or destinations of mobilized private finance, making it difficult to distinguish financial flows between developed and developing countries.

Private finance mobilized through public interventions and deployed via multilateral channels

222. Private finance mobilized by multilateral climate funds attributed to developed countries are USD 1.8 billion and USD 2.0 billion in 2021 and 2022, respectively. Most of the private finance was mobilized through shares in CIVs (35 per cent), direct investments in companies and SPVs (32 per cent), and simple co-financing (20 per cent) (OECD, 2024b). Private finance mobilized by multilateral climate funds attributed to developed countries are USD 1.8 billion and USD 2.0 billion in 2021 and 2022, respectively. Most of the private finance was mobilized through shares in CIVs (35 per cent), direct investments in companies and SPVs (32 per cent), and simple co-financing (20 per cent) (OECD, 2024b).

223. The level of private sector engagement in multilateral climate funds varies across the funds, depending on their specific mandates. According to OECD data, the GEF mobilized USD 66 million in 2021 and USD 145 million in 2022 in private climate finance. In 2021, the majority of this financing by the GEF was allocated to simple co-financing (86.1 per cent) and a portion to shares in CIVs (11.4 per cent). In the same period, the GCF mobilized a more substantial amount of private finance, approximately USD 1.6 billion in 2021 and USD 1.8 billion in 2022. Of the funds mobilized by the GCF, a significant share was through CIVs (53.7 per cent), while direct investment in companies and SPVs constituted 37.1 per cent of the mobilization.

Table 2.9

Private climate finance mobilized by multilateral funds to developing countries reported by Development Assistance Committee of the Organisation for Economic Co-operation and Development members, 2016-2022 (millions of United States dollar, annualized)

Fund	2016	2017	2018	2019	2020	2021	2022
CIF	–	–	376	–	–	132	–
GEF	722	381	118	650	644	66	145
GCF	540	372	538	16	698	1641	1823

224. Since 2015, MDBs have aligned their reporting on climate co-finance flows with harmonized definitions and indicators. In 2021 and 2022, MDBs mobilized USD 13 billion and USD 15.4 billion of private finance for low- and middle-income economies, respectively. Although this reflects an increase from USD 9.9 billion in 2020, it still falls significantly short of the commitment made at the 2019 United Nations Secretary-General's Climate Action Summit to mobilize USD 40 billion annually from private sector investors for climate investments (AfDB et al., 2019).[47]

225. According to OECD, private climate finance mobilized by MDBs to developing countries, attributed to developed countries, was USD 7.0 billion in 2021 and USD 10.7 billion in 2022. This represents an increase compared with an average of USD 6.8 billion in 2019 and 2020. Leveraging mechanism included direct investment in companies/SPVs (45 per cent), syndicated loans (24 per cent), guarantees (19 per cent), credit lines (5 per cent), shares in CIVs (5 per cent) and simple co-financing (2 per cent).

Other private finance flows

226. According to UNCTAD (UNCTAD, 2023b), renewable energy greenfield investment and international project finance in developing countries stood at USD 258.3 billion and USD 285.8 billion in 2021 and 2022, respectively. This is a substantial increase compared with USD 125.1 billion in 2020. However, these recent investment trends among the LDCs stand in stark contrast to those in other developing countries and have shown to have not yet recovered from the impact of the COVID-19 pandemic. Renewable investments declined from USD 16.6 billion in 2020 to an average of USD 8.8 billion in 2021 and 2022.

227. Private finance flows from developed to developing countries were USD 11.5 billion in 2021 and USD 11.8 billion in 2022 (CPI, 2023). In both years, more than 80 per cent, was allocated to the energy sector, mainly in mitigation projects concerning power and heat generation. Cross sectoral projects (8 per cent), AFOLU (6 per cent) and the water and wastewater sector (4 per cent) received the remaining private finance. This represents a 38 per cent increase from the 2019–2020 period, reflecting a recovery following the decline during the COVID-19 pandemic.

228. Renewables continue to be the top recipient of FDI globally for the fourth consecutive year, attracting USD 343.6 billion across 527 projects in 2022 (FDI Intelligence, 2023). Several large investments of more than USD 1 billion contributed to the strong performance of renewables especially in countries such as Egypt, India and Vietnam. However, coal, oil and gas, also received USD 104.8 billion of investments in 2022, a 538 per cent increase compared with 2021, primarily due to the energy crisis caused by global conflicts.

47) In their annual report, MDBs bifurcate the total private co-financing figures into two key elements, namely private direct mobilization and private indirect mobilization. Private direct mobilization refers to financing from a private entity on commercial terms, due to the active and direct involvement of an MDB that leads to the commitment of the private entity's finance. Private direct mobilization does not include sponsor financing. While private indirect mobilization 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.

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, 2019–2022 (billions of United States dollars)

	2019	2020	2021	2022	Geographical split		Notes
					Developed	Developing	
UNFCCC funds*	2.2	2.8	3.3	1.7	NA	Non-Annex I Parties	Outflows to projects in developing countries
Bilateral							
BRs (bilateral, regional and other channels only, preliminary data for 2021 and 2022) *	31.7	31.9	34.0	42.7	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[a]	12.9-33.9	14.1-41.9	13.3-22.0	22.5-53.5	OECD DAC	List of ODA recipients	Lower bound represent Principal amount while upper bound sums both Principal and Significant.
IDFC	20.0	19.4	19.9	21.1	OECD-based DFIs	Projects in non-OECD countries	
Bilateral public climate finance provided (OECD, 2024)	28.7	31.4	34.5	41.0	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
Multilateral							
Multilateral climate funds (including UNFCCC funds)	3.5	3.8	4.1	3.3	NA	Developing countries	Outflows to projects in developing countries
MDB climate finance attributed to developed countries (own resources only)	29.3-30.5	28.2-33.2	34.0 34.3	40.7-46.9	Annex II Parties	Non-Annex I Parties	Range of approaches A and B in Table 2.8
Multilateral flows, preliminary data from Parties for 2021 and 2022	8.6	9.2	9.9	10.1	Unknown	Unknown	Primarily inflows to multilateral institutions
Total multilateral climate finance provided and mobilized (OECD, 2024)	34.7	36.9	38.7	50.6	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 are unavailable
Of which inflows into multilateral institutions where outflows unavailable	0.3	0.2	0.2	0.3			
Of which multilateral climate funds	3.8	3.5	4.2	3.4			
Of which MDBs	30.5	33.2	34.3	46.9			

Table 2.9 (continued)

Summary of estimated climate finance flows from developed to developing countries, 2015–2020 (billions of USD)

	2019	2020	2021	2022	Geographical split		Notes
					Developed	Developing	
MDB climate finance (own resources only)	45.8	42.7	47.2	57.9	Non-attributed	Developing and emerging economies	
Private finance							
Mobilized through bilateral channels							
Private climate finance mobilized through bilateral public interventions from developed countries (OECD, 2024)	5.8	5.1	5.6	9.2	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	8.6	8.0	8.8	12.7	Annex II Parties, EU member States, Lichtenstein and Monaco	List of ODA recipients and/or non-Annex I Parties	This includes private finance mobilized by both multilateral climate funds and MDBs
Climate funds	1.7	1.4	1.8	2.0			
MDBs direct and indirect	21.8	9.9	13.0	15.4	Developed countries	Low- and middle-income country	
FDI							
BRs (bilateral, regional and other channels only, preliminary data for 2021 and 2022) *	31.7	31.9	34.0	42.7	Annex II Parties	Non-Annex I Parties	Changes to number of Parties reporting and methodological changes hinder comparisons across the years

Note: colours indicate data used for diagram.

[a] The data have been updated to include the International Fund for Agricultural Development and IMF's Resilience and Sustainability Trust

2.6. Available datasets that integrate climate change considerations into insurance, lending and investment decision-making

229. Since the adoption of the Paris Agreement in 2015, many initiatives, methodologies and approaches are being developed to help understand the contribution that public and private stakeholders can make toward achieving the goal outlined in Article 2, paragraph 1(c) of the Paris Agreement, which specifically targets "making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development".

230. This section provides a non-exhaustive list of existing public and proprietary data sets capturing the different responses of private capital owners and decision makers, to implement Article 2, paragraph 1(c) 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 (table 2.10). Each data set is also categorized by three dimensions - targets, implementation and impact – to report progress from intentions to actions and results (CPI, 2023f, 2023f).

- Targets refer to signalling intent to respond, potentially resulting in future engagement and flows. This dimension tracks indicative qualitative commitment and quantitative targets adopted to address climate change, as well as membership of initiatives that may influence future capital consistency.
- Implementation measures whether climate considerations are factored into decision-making processes, potentially resulting in future flows. This dimension looks at concrete qualitative changes to institution policies, governance, and investment approaches that may influence future capital alignment.
- Impact track finance allocated to climate solutions via investments in productive assets/activities and capital markets

231. There is generally a positive correlation between target and implementation, with organizations with targets seven more times more likely to take action than those with lower target responses (CPI, 2023f). See Chapter 4 for more details.

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

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
Aon, Weather, Climate and Catastrophe Insight Annual Report	Insurance and reinsurance	Insurance companies	USD 343 billion in losses USD 130 billion insured	USD 313 billion in losses USD 132 billion insured	USD 380 billion in losses. USD 118 billion insured	Impact	Provides estimates of losses from natural disasters and the amount covered by insurance
Banking Environment Initiative*	Loans	Banks				Targets, implementation	Group of global banks committed to pioneering actionable pathways towards a sustainable economy
Bloomberg NEF	Bonds, loans	Banks, corporations, governments, project developers	USD 1113.6 billion	USD 883.5 billion	USD 421.3 billion	Impact	Provides estimates of volumes of sustainability-linked loans and bonds
California Department of Insurance, Climate Risk Disclosure Survey	Insurance and reinsurance	Insurance companies	1 541 companies responded	1 600 companies responded, capturing 85 per cent of the United States insurance market	–	Implementation	Survey insurers' efforts to incorporate climate risks into their mitigation, risk management and investment plans
Carbon Pricing Dashboard/ Annual Report*	Carbon taxes, ETS	–	22.5 per cent of GHG emissions covered by ETSs or carbon taxes	22.3 per cent of GHG emissions covered by ETSs or carbon taxes	23.2 per cent of GHG emissions covered by ETSs or carbon taxes	Impact	Dashboard covering GHG emission coverage, carbon pricing, revenue, compliance mechanisms and carbon credit markets
Carbon Pricing Leadership Coalition	Carbon taxes, ETS	Government and its entities, State Owned Enterprises, banks, corporations	3.76 per cent of emissions are covered by a carbon price in the price range needed to meet the 2 °C target	–	–	Targets, implementation	Coalition explores the role of carbon pricing in supporting the transition
CDP	–	Corporations, cities, public authorities	13 126 companies disclosed	18 636 companies disclosed	23 202 companies disclosed	Implementation	Runs global disclosure system for investors, companies, cities and states/regions to manage their environmental impacts

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

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
Climate Action 100+*	–	Financial sector	615+ signatories	700 signatories USD 68 trillion assets under management	700 signatories USD 68 trillion assets under management	Targets, implementation	Investor-led initiative tracking companies' climate change governance, emission reductions and climate-related disclosures
Climate Assessment for Financial Institutions	Loans	Banks, MDBs and fund managers	–	USD 9.9 billion climate loans disbursed by partner FIs (December 2022)	USD 12.2 billion climate loans disbursed (November 2023)	Impact	Climate Assessment for Financial Institutions, a digital, web-based platform, helps banks and other FIs to assess climate eligibility and measure the development impact of the projects they finance
Climate Bonds Initiative	Bonds	Banks, corporations, governments, municipalities	Green use of proceeds: USD 593.9 billion Sustainability use of proceeds: USD 198.5 billion	Green use of proceeds: USD 509.5 billion Sustainability use of proceeds: USD 156.7 billion	Green use of proceeds: USD 587.6 billion Sustainability use of proceeds: USD 107.8 billion	Impact	Tracks issuances of green, sustainable and social bonds, and the use of proceeds
Climate Watch	–	All	81 countries, representing 73.8 per cent of GHG emissions, have communicated net zero targets (December 2021)	92 countries, representing 78.6 per cent of GHG emissions, have communicated net zero targets (December 2022)	101 countries, representing 80.7 per cent of GHG emissions, have communicated net zero targets (January 2024)	Implementation	Brings several data sets together to analyse and compare the NDCs under the Paris Agreement.
Coalition of Finance Ministers for Climate Action*	–	Finance ministers	65 members	78 members	92 members	Targets, implementation	Coalition of finance ministers collaborating to secure a just transition towards low-carbon resilient development
Convergence State of Blended Finance*	Blended finance	Public sector, philanthropic sources, private capital		Between 2021 and 2022, climate investment accounted for 73 per cent of all capital committed to blended finance transactions		Impact	Summarizes blended finance activities that mobilize private investments
ESG Book*	–	Financial sector, private institutions				Targets, implementation	Offers ESG and climate-related data, company-level and portfolio-level scores, and analytics tools for more than 100,000 companies

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

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
Exponential Roadmap Initiative	–	–	–	–	70 businesses with a combined USD 1.2 trillion in revenue are members (December 2023)	Targets; implementation	Produces Playbook, developed for companies and organizations providing guidelines to set targets, strategy and actions to meet mission
EY, Global Climate Risk Disclosure Barometer	Insurance, banking	Insurance companies, financial sector, non-financial sector	41 per cent of the sample conducted a scenario analysis 15 per cent have referenced the financial impact of climate change in their statements	49 per cent of the sample conducted a scenario analysis 29 per cent have referenced the financial impact of climate change in their statements	58 per cent of the sample conducted a scenario analysis 33 per cent have referenced the financial impact of climate change in their statements	Implementation	A comprehensive analysis of disclosures made by more than 1,500 companies across 47 countries
Fossil Fuel DivestInvest	Bonds, listed equity	Private organizations, educational institutions, governments, funds	1,500 institutions divesting with combined assets of USD 39.88 trillion (December 2021)	1,546 institutions divesting with combined assets of USD 40.57 trillion (August 2022)	1,634 institutions divesting with combined assets of USD 40.76 trillion (July 2024)	Impact	DivestInvest is a network influencing divestment from fossil fuels and investment in climate solutions Released a database of fossil fuel divestment commitments
GFANZ	–	Banks, asset managers, asset owners, insurers, financial services	450 FIs from 45 countries responsible for USD 130 trillion	550 FIs from 50 countries	675 FIs from 50 countries	Targets	Global coalition of eight independent net zero financial alliances Assists signatories to set targets and publish feasible transition plans Produces data on targets and transition plans
Global Private Capital Association	Private equity	Private equity fund managers, institutional investors			More than 300 private capital investors managing more than USD 2 trillion	Impact	Private equity funds raised and disbursed in emerging markets
IMF Climate Change Indicators Dashboard*	–	–	Annual GHG emissions (CO_2 equivalent, millions t): 49,000 Renewable energy production capacity share of total: 38.7 per cent	Annual GHG emissions (CO_2 equivalent, millions t): 51,300 Renewable energy production capacity share of total: 40.5 per cent	–	Impact, targets	Aggregated statistical indicators on climate change, GHG emissions, trade in environmental goods, green finance and more

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

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
InfluenceMap	–	FIs	The equity portfolios of the world's 30 largest asset management groups deviated from a Paris-aligned target by between 8 and 27 per cent		Assessment of the 45 largest FIs shows 95 per cent of portfolios are misaligned with the Paris Agreement goals	Implementation	Produces data-driven analysis on how business and finance are impacting the climate crisis Maintains FinanceMap, LobbyMap, Carbon Majors data set, etc..
Investor Agenda	Bonds, loans, assets under management	Banks, fund managers, corporations				Targets, implementation	Investor Agenda's the Investor Climate Action Plans provides investors with clear expectations for issuing and implementing comprehensive climate action plans
Mission Possible Partnership	–	Corporations	Reached 400 members	110 net zero aligned industrial plants have reached Financial Investment Decision, 473 are in early-stage planning, 700 are needed in operation by 2030 to reach critical mass in time (July 2024)		Implementation, targets	Movement driving industrial decarbonization across value chains of the world's highest-emitting heavy industry and transport sectors
NAZCA Global Climate Action Portal	–	–	–	–	20 411 actors representing 39 512 actors in 194 countries (July 2024)	Implementation	An online platform on which actors can display their commitments to climate change
NGFS*	–	Financial sector, central banks	105 members, 16 observers	121 members, 19 observers	–	Implementation	Network of central banks and supervisors Network defines and promotes best practices to be implemented
NZAM	Assets under management	Asset managers	220 signatories representing USD 57 trillion assets under management (December 2021)	273 signatories representing USD 61 trillion assets under management (May 2022)	More than 315 signatories and USD 57 trillion assets under management (December 2023)	Targets	Aligning portfolios with net zero emissions by 2050

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

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
NZAM	Assets under management	Asset managers	220 signatories representing USD 57 trillion assets under management (December 2021)	273 signatories representing USD 61 trillion assets under management (May 2022)	More than 315 signatories and USD 57 trillion assets under management (December 2023)	Targets	Aligning portfolios with net zero emissions by 2050
NZBA	Loans	Banks	43 founding member banks in April 2021	51 per cent of 120 members had set intermediate net zero targets (October 2022)	71 per cent of 136 members had set interim net zero targets (September 2023)	Targets	Aligning lending and investment portfolios with net zero emissions by 2050
Net Zero Financial Service Providers Alliance	–	Investment advisers, rating agencies, auditors, exchanges, index providers, auditors	23 signatories (November 2021)	27 signatories (November 2022)	31 signatories (December 2023)	Targets	Committed to support net zero GHG emissions by 2050 or sooner
Net Zero Finance Tracker (NZFT)	Assets under management	Asset Owners, Asset Managers, Insurance, PE, VC, and hedge funds, Banks	98% of entities have a mitigation goal but only 40% have a well-developed goal 57% have reached the Initial Response stage of Implementation, with most progress on Climate Risk Management, Strategy and Disclosure as well as the adoption of Internal Accountability Framework	Less than 20% have engaged in activities that encourage a net zero transition Green lending activities from GFANZ institutions observed an average annual increase of 30% between 2020 and 2022, exposure to fossil fuels remains significant (NZFT,2023)		Targets, implementation, impact	Analysis covers 562 members of the GFANZ
NZICI	–	Investment advisers	12 founding investment consultancy firms, managing around USD 10 trillion	–	11 signatories (September 2023)	Targets	Brings together global investment consultants seeking to align operations and advisory services with the Paris Agreement In 2023, NZICI members started reporting progress against commitments

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
Paris Aligned Investment Initiative's Net Zero Investment Framework 2.0	Assets under management	Institutional investors		–	In 2024, the Net Zero Investment Framework 2.0 was released to improve guidance, primarily around asset class guidance	Targets, implementation	The Net Zero Investment Framework guides investors in setting targets and producing net zero strategies and transition plans In 2024, the Net Zero Investment Framework 2.0 was released to improve guidance, primarily around asset class guidance
PCAF	Listed equity, bonds, private equity, loans	Banks, asset managers, funds	182 FIs with total combined assets under management of USD 56.0 trillion (December 2021)	344 FIs with total combined assets under management of USD 85.3 trillion (November 2022)	507 FIs with total combined assets under management of USD 87.2 trillion (July 2024)	Targets, implementation	Develop and implement a harmonized approach to assess and disclose GHG emissions by members
United Nations Principles for Responsible Banking	–	Banks, funds	240 committed banks representing 40 per cent of the banking industry's assets	–	325 committed banks representing half of the banking industry's assets (USD 90 trillion)	Implementation	Ensures that signatory banks' strategies and practice align with the SDGs and the Paris Agreement
United Nations Principles for Responsible Investment*	Assets under management, financial services	Asset owners	3,404 signatories		More than 5 000 signatories	Targets, implementation	Developed six principles for responsible investment Works with FIs to implement these principles for a sustainable global financial system
UNEP's Principles for Sustainable Insurance	Insurance	Insurers, companies	More than 100 signatories representing about one third of the world's insurance premiums	–	153 signatories representing about one third of the world's insurance premiums	Implementation	Suggest best principles and incentivize sustainable practices for the insurance industry
Race to Zero*	–	Companies, cities, regions, and financial, educational, and health-care institutions	Launched in 2021	26 partners, 116 countries, 11,309 members	26 partners, more than 13 500 members	Implementation	Global campaign rallying non-State actors to take rigorous and immediate action to halve global emissions by 2030
Race to Resilience*	–	Non-State actors	Launched in 2021	34 partners, 139 countries, 1,762 members	Partners have mobilized USD 39.44 billion in financial resources	Implementation	Global campaign rallying non-State actors to take rigorous and immediate action to build the resilience of four billion vulnerable people and communities

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
SBTI	–	Banks, corporations	27 per cent of high-impact companies with SBTs; 68 per cent with science-based targets were aligned with the 1.5 °C goal	34 per cent of global market capitalization with science-based targets; 79 per cent with targets were aligned with the 1.5 °C goal	4 205 companies with science-based targets, representing 39 per cent of the global market capitalization	Targets, implementation	Tracks the number of companies setting science-based GHG emission reduction targets, and their operational emissions
ShareAction	–	Asset mangers	–	–	A study of 77 of the largest asset managers shows that 35 per cent have a "very limited approach to managing ESG risk" (D or E)	Implementation	Produce investor guides for asset owners for net zero and circular economy
Sustainable Accounting Standards Board	–	Corporations				Implementation	The Sustainability Accounting Standards Board guides the disclosure of financially material sustainability information for 77 industries In August 2022, ISSB assumed responsibility for the Sustainability Accounting Standards Board standards
Sustainable Finance Observatory*	–	–			387 financial players identified; 207 sustainability indicators (July 2024)	Implementation	Transparency initiative to understand how the financial sector is contributing to the transition to a Paris-aligned sustainable economy Aggregates the Net-Zero Alliance performance in the 'net zero donut'
Sustainable Stock Exchanges Initiative	Listed equity	Stock exchanges	113 stock exchanges are members Reaches 60,941 listed companies (market capitalization of USD 126 trillion)	118 stock exchanges are members Reaches 62,201 listed companies (market capitalization of USD 120 trillion)	–	Implementation	List of partner exchanges promoting sustainability in equity markets
SwissRe Institute	Insurance and reinsurance	Insurance companies	Natural catastrophes resulted in USD 270 billion of losses USD 111 billion was insured	Natural catastrophes resulted in USD 275 billion of losses USD 125 billion was insured	Natural catastrophes resulted in USD 280 billion of losses USD 108 billion was insured	Impact	Provides estimates of losses from natural and human-made catastrophes and amount insured

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows) 2021	2022	2023	Dimension type	Description
Systems Change Lab*	–	–	Share of coal in electricity generation (2030 target: 4 per cent): 36.9 per cent, "well off-track"	Share of coal in electricity generation (2030 target: 4 per cent): 36 per cent, "well off-track"	Share of coal in electricity generation (2030 target: 4 per cent): 35.5 per cent, "well off-track"	Targets, impact	Identified 70 "shifts" needed to protect people and the planet Measure progress towards 2030/2050 science-based targets and identify enablers and barriers of systems change
TPI	Assets under management	Asset managers	–	124 investors globally have pledged support for the TPI to date (May 2022), representing more than USD 40 trillion combined assets under management and advice	151 investors globally have pledged support for the TPI to date (March 2024), representing more than USD 60 trillion combined assets under management and advice	Targets, implementation	A global, asset-owner-led initiative that assesses companies' preparedness for the transition to a low-carbon economy Established June 2022
United Nations convened NZAOA	Assets under management	Institutional investors	56 members accounting for USD 9.3 trillion assets under management; 52 per cent have set targets for attainment in 2025, covering USD 4.6 trillion in assets under management	74 members accounting for USD 10.6 trillion in assets under management; two thirds of assets under management held by members with intermediate net zero targets	89 asset owners with USD 9.5 trillion in assets under management; USD 8.4 trillion under the target-setting framework (July 2024).	Targets, implementation	Aligning for a portfolio with net zero emissions by 2050
United Nations convened Net Zero Insurance Alliance	Insurance	Insurance companies	Launched in 2021 with eight founding members	Group of 29 leading insurers, representing 14 per cent of the world's insurance premiums globally	Many members left owing to anti-trust disputes Group of 11 signatories, representing USD 210 billion in gross written premiums (September 2023)	Targets	Transition insurance and reinsurance underwriting portfolios to net zero by 2050
UNCTAD World Investment Report*	FDI The number includes funds, bonds and voluntary carbon markets	–	Sustainable finance market USD 5.2 trillion	Sustainable finance market USD 5.8 trillion	Sustainable finance market more than USD 7 trillion	Impact	Monitors global, regional and national investment trends and developments, including sustainable finance

Initiative/data set (new additions marked with*)	Instrument type	Investor Type	Measurement (coverage, indicators, flows)			Dimension type	Description
			2021	2022	2023		
We Mean Business Coalition	Listed equity, bonds	Banks, corporations	–	–	2 339 listed companies representing 74.48 per cent of the market capitalization values in the MSCI All Country World Index (July 2024)	Targets, implementation	Global non-profit coalition working with businesses and corporations to accelerate the transition to a just and climate-resilient net zero economy

3

Assessment of climate finance flows

3.1. Introduction

232. This chapter considers the nature of major channels of climate finance flows provided and mobilized from developed countries to developing countries for climate action. These flows are an important subset of the climate finance flows presented in chapter 2 above and the public finance flows included in this subset can often absorb more risk and accept lower returns than private finance, as recognized in the outcomes of the first global stocktake.[48] Concessional public finance, with no or lower return expectations, has a strong role to play in research, demonstration and supporting the mobilization of private climate finance flows.

233. This chapter first considers the key features of climate finance flows from developed to developing countries. It reviews the themes, financial instruments and geographical distribution of finance flows, with a focus on the quantity of climate finance (chapter 3.2 below).

234. This chapter then presents insights into the effectiveness of 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 as they relate to access to and the ownership of climate finance and the impact of climate finance flows (chapter 3.3 below).

235. This chapter concludes with a reflection on the overall amount of climate finance in the context of overall finance flows, needs, risks and opportunities (chapter 3.4 below).

236. This chapter considers quantitatively and qualitatively the emerging trends in international climate finance for 2021–2022, drawing on the best available data and research. Quantitative analysis draws on preliminary estimates available from Parties. However, to provide a more holistic assessment, these data are supplemented with activity level data available from OECD DAC climate-related development assistance (henceforth referred to as bilateral finance), multilateral climate funds (CFU Data Dashboard), the OECD Climate Finance Provided and Mobilised by Developed Countries in 2013–2022 report (attributed mobilized private finance) and MDB joint reports.

237. Both the Convention and the Paris Agreement incorporate considerations of equity, including through the principle of common but differentiated responsibilities and respective capabilities. Equity is not addressed as a separate section within this chapter. Instead, this chapter explores elements of equity in international climate finance throughout (e.g. in the balance between adaptation and mitigation, the provision of finance to the LDCs and SIDS, just transition and the degree to which gender considerations have been integrated

3.2. Thematic objectives and geographical distribution of climate finance from developed to developing countries

238. This section considers the nature of major channels of climate finance flows that developed countries have made available to developing countries. Different classification systems used in these data sets, however, make comparisons difficult (see annex A for details of which countries are included under the various classification systems). Each data source is reviewed separately in order to avoid double counting of climate finance from developed to developing countries.

239. The annual average of climate financial support through bilateral, regional and other channels as reported in preliminary estimates by Partis was USD 38.4 billion in 2021—2022; this was a 21 percent increase from 2019—2020 (USD 31.8 billion) reported by Annex II Parties in their BR5. During the same period, USD 3.7 billion a year was channelled through multilateral climate funds compared with USD 3.1 billion in 2019—2020. Annual average MDB climate finance flows were estimated at USD 49.0 billion, an increase of 28 per cent over 2019—2020 (USD 38.3 billion). Finally, the annual average of private finance flows mobilized by public interventions was estimated at USD 18.2 billion (figure 3.1).

48) See https://unfccc.int/sites/default/files/resource/cma2023_16a01E.pdf

Figure 3.1

Characteristics of climate finance flows from developed to developing countries in 2021-2022 by channel, theme and financial instrument

		Bilateral climate finance[a]	Multilateral climate funds[b]	MDB climate finance	Private finance mobilization[c]
Annual average (billions of United States dollars)		38.4	3.7	49.0	18.2
Area of support	Adaptation	28%	16%	36%	12%
	Mitigation	51%	34%	62%	79%
	Cross-cutting	22%	51%	2%	9%
Instrument	Grants	Not available in preliminary estimates	37%	11%	N/A
	Loans		52%	75%	
	Other		12%	15%	
Leveraging mechanisms	Direct investments in companies/SPVs	N/A			30%
	Shares in CIVs				21%
	Guarantees				18%
	Syndicated loans				16%
	Credit lines				8%
	Co-financing				6%

[a] Bilateral climate finance data are sourced from preliminary estimates from Parties in their forthcoming BTR submissions. Preliminary estimates are partial and provisional and subject to change once official data are submitted by 31 December 2024. A significant proportion of preliminary data do not include instrument- or geographical-level information.

[b] Including the Adaptation for Smallholder Agriculture Programme, AF, BioCarbon Fund, CTF, Forest Carbon Partnership Facility, FIP, Global Climate Change Alliance, GEF Trust Fund, GCF, LDCF, Partnership for Market Readiness, Pilot Programme for Climate Resilience, SREP, Special Climate Change Fund and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries.

[c] Private climate finance mobilization data are sourced the OECD Climate Finance Provided and Mobilised by Developed Countries in 2013–2022 report (OECD, 2024b), with a more detailed breakdown sourced from OECD.

3.2.1. Thematic objectives of climate finance from developed to developing countries

240. The decisions taken by COP 15, COP and COP 17 have reflected the importance of balance between adaptation and mitigation finance. This is also reflected in Article 9, paragraph 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 under either the Convention or the Paris Agreement so this section presents the ratios of adaptation to mitigation finance by data source at face value.

241. From a provider perspective, the quantitative assessment of balance between adaptation and mitigation remains complex as a result of:

- **Adaptation and mitigation being reported and accounted for using different approaches** – in the OECD DAC CRS, the Rio markers are used to establish the level of mainstreaming of climate objectives in reported activities. It distinguishes if a climate objective has been targeted, and if that objective is principal or significant. The climate-related development finance as analysed here, includes both principal and significant climate objectives equally and activities that may target both adaptation and mitigation.
Data for the MDBs, as a result of the common principles approach, considers only the climate component of a programme or project. Mitigation components can be easier to identify and are often reported on total project costs (e.g. a renewable energy project) or specific technologies (e.g. energy efficiency). Adaptation activities, however, require a clear link with climate vulnerabilities and only the incremental costs of project activities that respond to the vulnerability are accounted for (see chapter1.2.2).

Annex II Parties in their BRs take different approaches to reporting mitigation and adaptation finance (see section 1.3.1 and 1.3.2 in the fourth (2020) BA). Some apply a fixed coefficient to the Rio markers reported to the OECD DAC while others take an activity-level approach.

- **The thematic distribution of climate finance through various channels is often reported at face value and so does not consider the financial instrument through which the finance is provided.** The GCF, in its efforts to seek a balance between mitigation and adaptation, intends to spend 50 per cent of its funding on adaptation (of which 50 per cent is to be spent in the LDCs, SIDS and African States), all tracked on a grant-equivalent basis. This allows for a comparison of funding amounts that consider the financial instruments employed (i.e. grants, loans, equity and guarantees). As at October 2023, 54 per cent of GCF approvals were for the adaptation theme and 46 per cent were for the mitigation theme in grant equivalents (while on nominal terms 56 per cent is for mitigation and 44 per cent for adaptation).
- The extent to which crosscutting finance with both adaptation and mitigation objectives contributes to a balance of adaptation and mitigation efforts is unknown due to methodological challenges of assessing respective impacts and contributions.

242. From a recipient perspective, the second Needs Determination Report of the SCF, reveals a larger number of total and non-costed needs for adaptation in developing countries (as compared with mitigation) which could also inform the discussion on balance beyond financial volumes. Any conclusive assessment on the financial resources required per climate mitigation and adaptation theme would be informed only where there is increased comparability and availability of needs assessments and costing and an appropriate recipient balance is likely to vary over time and across contexts.

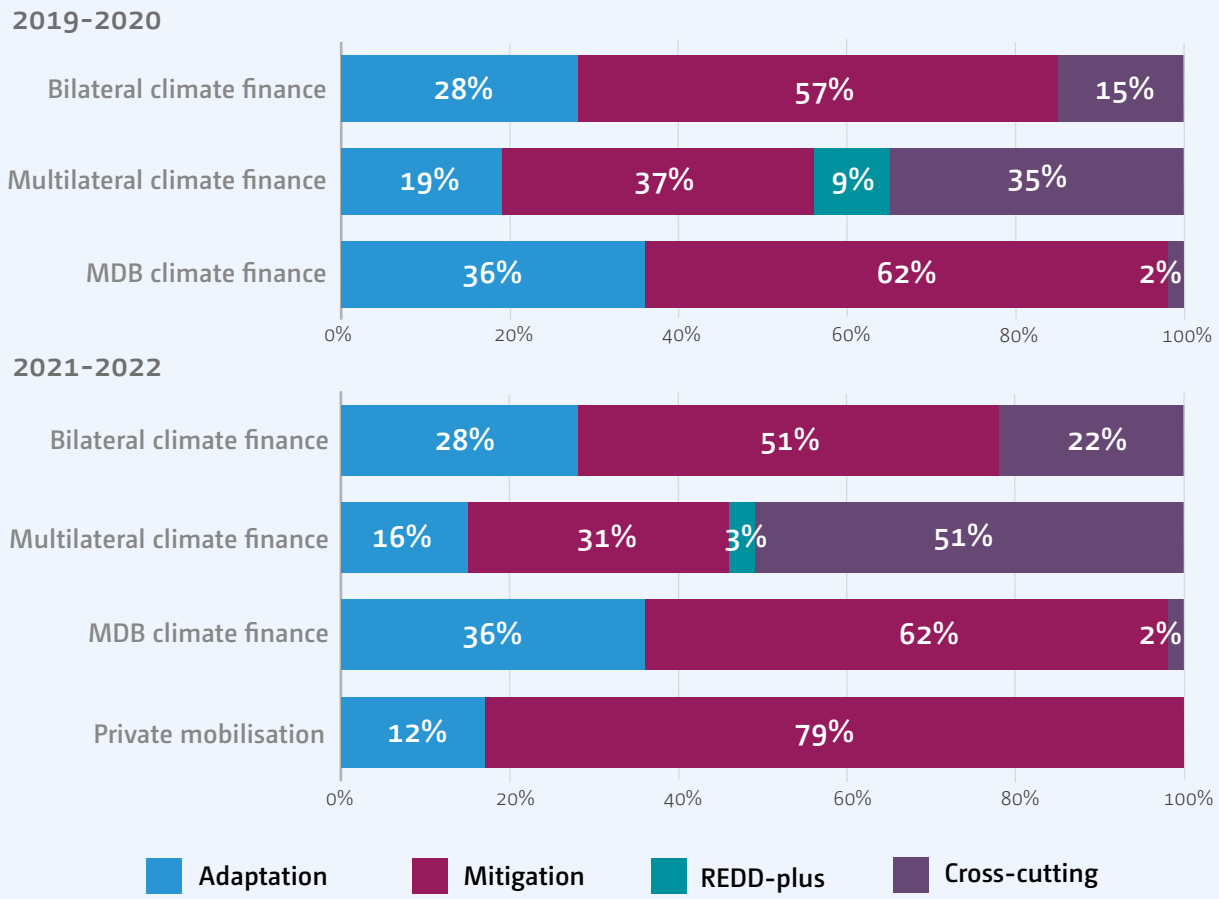
243. Of the climate-specific financing through bilateral, regional and other channels reported in preliminary estimates by Parties for 2021—2022, 27 per cent was reported as adaptation finance, similar to 2019—2020, while 51 per cent was mitigation finance, compared with 57 per cent in 2019—2020. Finance towards projects with both a mitigation or adaptation objective or 'cross-cutting' increased to 22 per cent in 2021—2022 from 15 per cent in 2019—2020.

244. Funding channelled through the multilateral climate funds amounted to USD 3.7 billion per year in 2020—2021, as compared to USD 3.1 billion per year in 2019—2020. Of this funding, an average of 16 per cent supported adaptation in 2021—2022, compared with 19 per cent in the 2019—2020 period. Since 2011, finance approved for cross-cutting projects through the multilateral climate funds has increased from 6 to 51 per cent, making it harder to assess the total adaptation and mitigation balance of the approved funding from the multilateral climate funds (figure 3.2).

245. MDB climate finance flows were estimated at USD 49.0 billion a year in 2021—2022, an increase from USD 38.3 billion a year in 2019-2020. Mitigation accounted for 62 per cent of MDB climate finance in 2021—2022, remaining the same as it was in 2019—2020. Actively working to redress the imbalance between adaptation and mitigation finance at face value, the MDBs have increased their total adaptation finance from USD 15.0 billion in 2019—2020 to USD 18.5 billion in 2020—2021 (figure 3.2).

Figure 3.2

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



246. Developed countries mobilized USD 18.2 billion in climate finance for developing countries in 2021–2022, an increase from USD 13.8 billion in 2019–2020. Forty-one per cent of the private climate finance was mobilized through bilateral public climate finance, 49 per cent through MDBs and 10 per cent through multilateral climate funds. Seventy-nine per cent of mobilized private finance went into mitigation projects, while 12 per cent was for adaptation.

Funding arrangements relevant to averting, minimising and addressing loss and damage

247. The discussions related to loss and damage recognize the limits to adaptation in human and natural systems that lead to both economic and non-economic consequences, strongly concentrated among vulnerable populations and unequally distributed across systems, regions or sectors (IPCC, 2023a). 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 cooperation and facilitation required to enhance understanding, action and support in the areas of: 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. Article 8 of the Paris Agreement does not refer to finance, however.

248. The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts was established at COP19 (decision 2/CP19). Guided by an Executive Committee, it is designed to enhance

relevant action and support, including finance, technical and capacity building for loss and damage. At COP25, the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change was established under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts to further discussions on action and support for loss and damage. At COP 28, UNDRR and the United Nations Office for Project Services were selected as the host consortium of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change secretariat, in Geneva, Switzerland, which hosted its first meeting in 2024..

249. At COP 27 and CMA 4, Parties decided to establish new funding arrangements including a dedicated fund, to assist developing countries in responding to the economic and non-economic loss and damage from the adverse effects of climate change. After much work on the funds core modalities in the transitional committee on the operationalization of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 of decisions 2/CP.27 and 2/CMA.4 in 2023, the governing instrument for the fund was launched at COP 28 and CMA 5, which assigns the fund a lead coordinating and mobilization role for the funding arrangements. At COP 28 and CMA 5 an initial USD 661 million was pledged to the fund by 18 countries and the European Commission.[49] The fund is expected to work coherently with and be complementary to funding arrangements for loss and damage, that are to be focussed on providing and assisting in mobilizing new and additional resources while complementing sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement. Under such efforts there is a recommended action for United Nations agencies, MDBs and bilateral agencies to include, as appropriate, in their annual reports, information on their efforts to assist developing countries particularly vulnerable to the adverse effects of climate change in responding to loss and damage from 2024.[50]

250. The first meeting of the Board of the Fund referred to in decisions 1/CP.28 and 5/CMA.5 was hosted in May 2024, which selected co-chairs and engaged on the design of the fund as a World Bank hosted financial intermediary fund. The second Board meeting was hosted in July, confirming the Philippines as the host of the Fund's Board, while work continues to fully operationalize the Fund[51].

Nature-based solutions

251. Financing for nature-based solutions is an emerging theme of interest. Nature-based solutions refer to "actions to protect, sustainably manage and restore natural and modified ecosystems, that address societal challenges (e.g. climate change, food and water security or natural disasters) effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"[52]. The SCF Forum on Nature-based Solutions further highlighted that such solutions seek to address development, climate and biodiversity priorities and enable sustainable development (SCF, 2022b). Nature-based solutions financing therefore includes a wide variety of topics, including avoided deforestation, sustainable forest use and management, restoration and other land-use (including agriculture and food), as well as oceans and fisheries; contributing to both adaptation and mitigation to climate change.

252. COP 28 and CMA 5 outcomes, including the global stocktake and the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation, emphasizes the link between climate, nature, forests and other ecosystems, while also recognizing their implications on food production. The COP28 Declaration p on Food and Agriculture, signed by 160 countries, sought to better recognize climate change impacts on agriculture and integrate food systems into NDCs by 2025 (alongside pledges for mangrove protection and methane reduction). Few COP 28 decisions referred to formal financing of nature-based solutions, beyond the global stocktake noting a need for enhanced support and investment to meet deforestation goals, with financial pledges emerging largely from research consortiums and philanthropy, or around specific pledges.

253. It remains challenging to estimate finance flows to nature-based solutions. Nature-based solutions activities often sit at the intersection of many sectors and priorities. There are also multiple and interacting, direct and indirect drivers of land and ocean use. In 2023, UNEP estimated current finance flows to nature-based solutions at USD 200 billion, led by governments (82 per cent), followed by the private sector (18 per cent).

49) UNFCCC (2024). The Loss and Damage Fund. UNFCCC, available at: https://unfccc.int/process-and-meetings/bodies/funds-and-financial-entities/loss-and-damage-fund-joint-interim-secretariat/pledges-to-the-loss-and-damage-fundhttps://unfccc.int/loss-and-damage-fund-joint-interim-secretariat

50) https://unfccc.int/sites/default/files/resource/cma5_auv_10g_LnDfunding.pdf

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

52) Available at https://www.iucn.org/theme/nature-based-solutions

This figure includes the protection of biodiversity and landscapes, sustainable agriculture, forestry and fishing, water resources and wastewater management, pollution abatement, environmental policy, biodiversity offsets and credits, sustainable supply chains and more (UNEP, 2023).

254. When reporting on bilateral climate-related finance, OECD DAC does not presently have a dedicated Rio marker or relevant sub-thematic designation for nature-based solutions. The OECD DAC CRS identifies ODA provided to the forestry sector, however, although the applications are broad. The MDBs also do not single out nature- or forest-specific finance when reporting on their climate finance. It is only the climate spending of the multilateral climate funds for which forestry-related funds are more readily identified. This is largely due to the existence of dedicated funds supporting REDD+ activities. These include the multilateral United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, the Forest Carbon Partnership Facility Readiness Fund, the FIP and REDD+ pilots of the GCF; the regional Central African Forest Initiative and Congo Basin Forest Fund (before its closure in 2018); and national funds, including the Amazon Fund.

255. While many activities of the multilateral funds supporting REDD+ have been readiness based, the intention has always been to deliver emission reductions. To this end, national and regional funds exist that use such emission reductions to raise resources, including the Amazon Fund or the Central African Forest Initiative. In contrast, funds are also seeking to deliver and purchase emission reductions the project level. These include the Forest Carbon Partnership Facility Readiness Fund, the BioCarbon Fund These differ in offering ex ante, pre-agreed emission reduction purchase agreements or offering ex post payments for emission reductions already delivered (Watson, Schalatek, and Evéquoz, 2024).

256. REDD+ financing does not constitute the entirety of forest finance, however. A wider set of multilateral funds and other channels of climate finance support the forestry sector with both adaptation and mitigation benefits. Financing for accelerating avoided deforestation was also centralized around pledges, including those linked to the COP27 Forest and Climate Leader's Partnership to halt and reverse forest loss by 2030. A civil society assessment of finance for forests estimates commitments of USD 28.9 billion between 2021 and 2025, but poor transparency on how pledges will be operationalized or implemented, leads to an assessment that this figure itself may be an overestimate and that an estimated USD 5.7 billion has been disbursed(Forest Declaration Assessment, 2023).

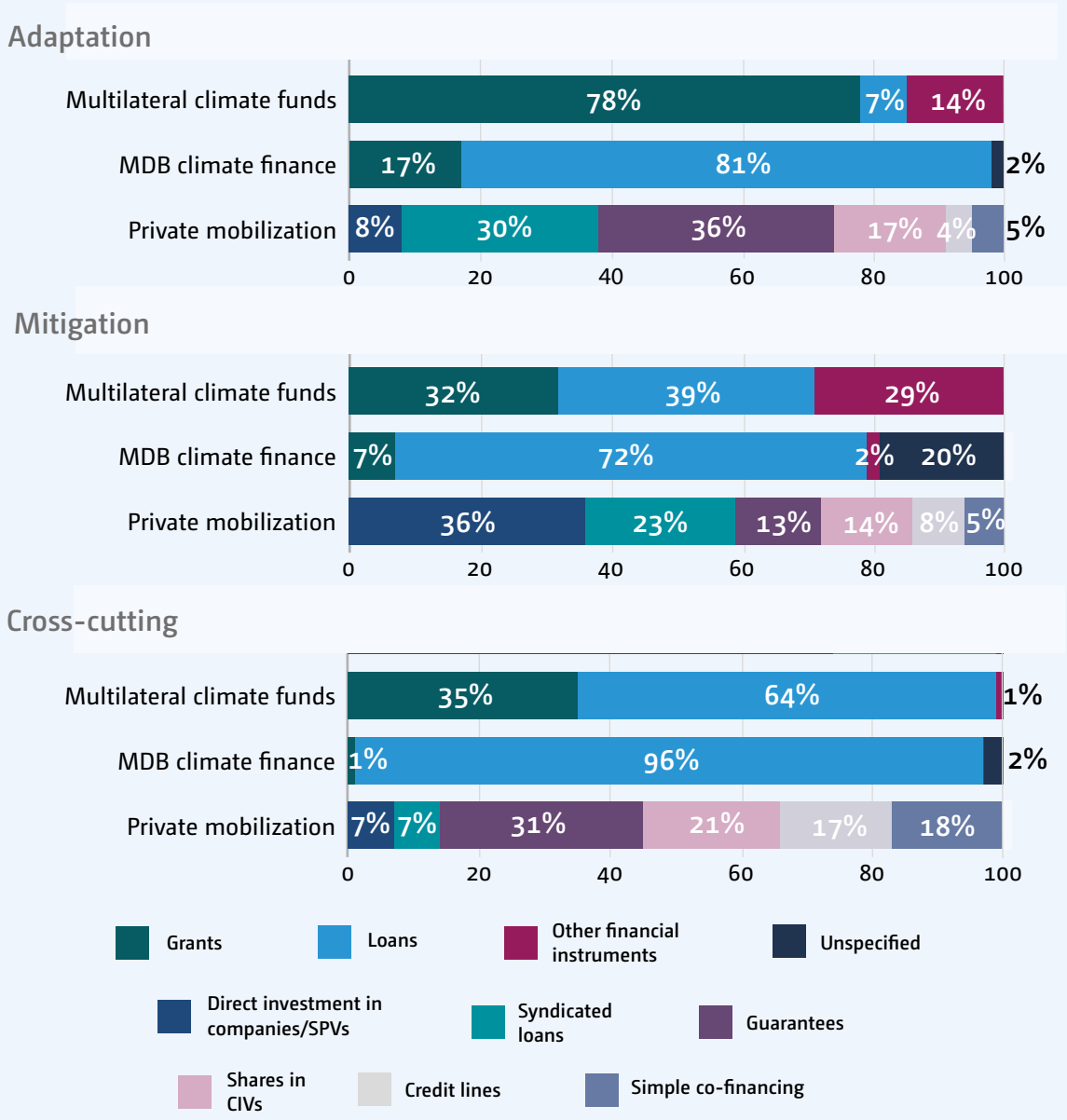
3.2.2. Financial instruments employed in climate finance from developed to developing countries

257. A variety of financial instruments are used in the provision and mobilization of climate finance from developed to developing countries. Financial instruments indicate how capital is deployed and the conditions upon it. There are four main financial instruments through which climate finance flows from developed to developing countries: grants, loans, guarantees and equity. These financial instruments have differing roles in mitigating investment risks and attracting private finance (Mustapha, 2022) and have differing repayment conditions. 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.

258. Preliminary estimates on bilateral climate finance from Parties for 2021—2022 does not allow an analysis by instrument. Finance from multilateral climate funds was significantly grant-based, particularly for adaptation. MDB finance remains predominantly loan-based (figure 3.3). In 2021—2022, 78 per cent of adaptation finance provided by the multilateral climate funds took the form of grants, compared with almost 100 per cent in 2019—2020. Seven per cent was provided as concessional loans. By contrast, only 17 per cent of mitigation finance from the MDB took the form of grants, with 81 per cent provided as largely concessional loans and 2 per cent provided either as equity and or as guarantees.

Figure 3.3

Public climate finance flows from developed to developing countries in 2021—2022, by theme, source and financial instrument



Note: bilateral climate finance is not included as sourced from preliminary estimates from Parties in their forthcoming BTR submissions. Preliminary estimates are partial and provisional and subject to change once official data are submitted by 31 December 2024. A significant proportion of preliminary data does not include instrument- or geographical-level information.

259. Across all channels, private climate finance was mobilized by public finance providers though a diverse range of instruments, depending on their mandate, relevance, and country and sectoral context. These included direct investments in companies/SPVs (30 per cent), syndicated loans (21 per cent), guarantees (18 per cent) and shares in CIVs (16 per cent). While direct investment in companies/SPVs was used by all public actors, other instruments varied among them. For example, guarantees were used by MDBs and bilateral agencies (20 percent, on average), multilateral climate funds more often employed simple co-financing and shares in CIVs to mobilize private finance, and bilateral channels mostly used credit lines.

260. The ability of different financial instruments to attract private finance varies owing to geography, country context, and the theme and nature of the programme or project to be financed. This is a result of the diverse and differing set of private actors, their

mandates, risk-appetite and return expectations. Over time, new instruments at the portfolio and transaction level are being proposed or applied to attract private finance by governments, development finance providers and commercial FIs. These have included blended finance funds and facilities (and the diversity of structures that offers given that no standard definition of blended finance exists (NGFS, 2024), often administered by multilateral organizations, as well as bond issuance, or anchor investments in nascent bond markets, and project aggregation and securitization (where an asset such as a loan is converted to a format that can be sold to other investors). Other opportunities to attract private finance have been identified such as MDB reform, a greater use of guarantees and credit enhancement in established sectors such as renewables, and enabling local currency financing (Convergence, 2024; OECD, 2023e; IEA, 2024b)

The role of insurance for climate action

261. Insurance is a financial instrument that can also be used to support both mitigation and adaptation actions. Insurance acts to share and spread the financial consequences of risk. In the light of the differing nature and structure of insurance financial instruments, efforts to increase the scope of insurance to support adaptation and mitigation are qualitatively discussed and not identified in the financial flows quantitatively assessed in this report.

262. Insurance is able to increase the finance available during recovery from climate-related events. Insurance cannot replace efforts to reduce and manage physical climate risks and needs to be carefully designed in order to incentivize further adaptation and avoid maladaptation (Müller, Johnson, and Kreuer, 2017; Ignaciuk, 2015) and to support those most vulnerable to the adverse impacts of extreme events (Hillier, 2018; Schaefer and Waters, 2016). Furthermore, many standard insurance products are 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 and products.

263. There are a number of types of insurance products that are relevant to increasing resilience to climate impacts. Such insurance products can be directly taken by the individual, household or corporation, or indirectly taken by governments themselves to facilitate rapid and systematic assistance for people in need. Governments can participate in insurance either individually or through multi-country risk pools. In a pool, several countries in a given region take out insurance together, thus diversifying risk and reducing premiums: making climate risk insurance more affordable. Insurance products related to climate-impacts can rely on proven losses or can be index- based and parametric, in which payments are not based on the actual loss incurred but, on a trigger (such as wind force or precipitation levels) that leads to the disbursement of a predefined payment. This makes index- based insurance quicker and more cost-effective with regard to processing benefit payments for the insured.

264. There are an emerging number of regional risk pools (e.g. the African Risk Capacity, CCRIF, the Pacific Catastrophe Risk Assessment and Financing Initiative and, the Southeast Asia Disaster Risk Insurance Facility). CCRIF, now covering 23 member governments and three electric utility members, was the first multi-country risk pool to be established. Between 2007 and October 2023, it made 64 pay outs totalling USD 268 million, all within 14 days of an event, for parametric insurance policies for tropical cyclones, earthquakes and excess rainfall, including for the fisheries sector and covering electric and water utility products (CCRIF, 2023). CCRIF was established with bilateral support with World Bank technical leadership and was capitalized through contributions to a multi-donor trust fund. ARC Replica allows humanitarian partners, including the World Food Programme and the Office of the United Nations High Commissioner for Refugees, to complement and enhance insurance policies purchased by ARC member States and strengthen technical capacities in member State governments. Contingency plans set out what these institutions' complementary response measures are in the event that large-scale climate shocks occur; efforts are under way to further allow such a model to respond to local rather than national climate shocks.[53]

265. Insurance contributes to financing mitigation by sharing the perceived and real risks of low-emission technologies and investment. It can be used to cover performance shortfalls of products or business models and transfer technology and performance-related risks to third parties, for example, accelerating the uptake of technologies and mobilizing mitigation financing. In particular, it can be useful to reach micro, small and medium-sized enterprise that often lack easy access to project-level finance (SEED, 2020). Discussions are

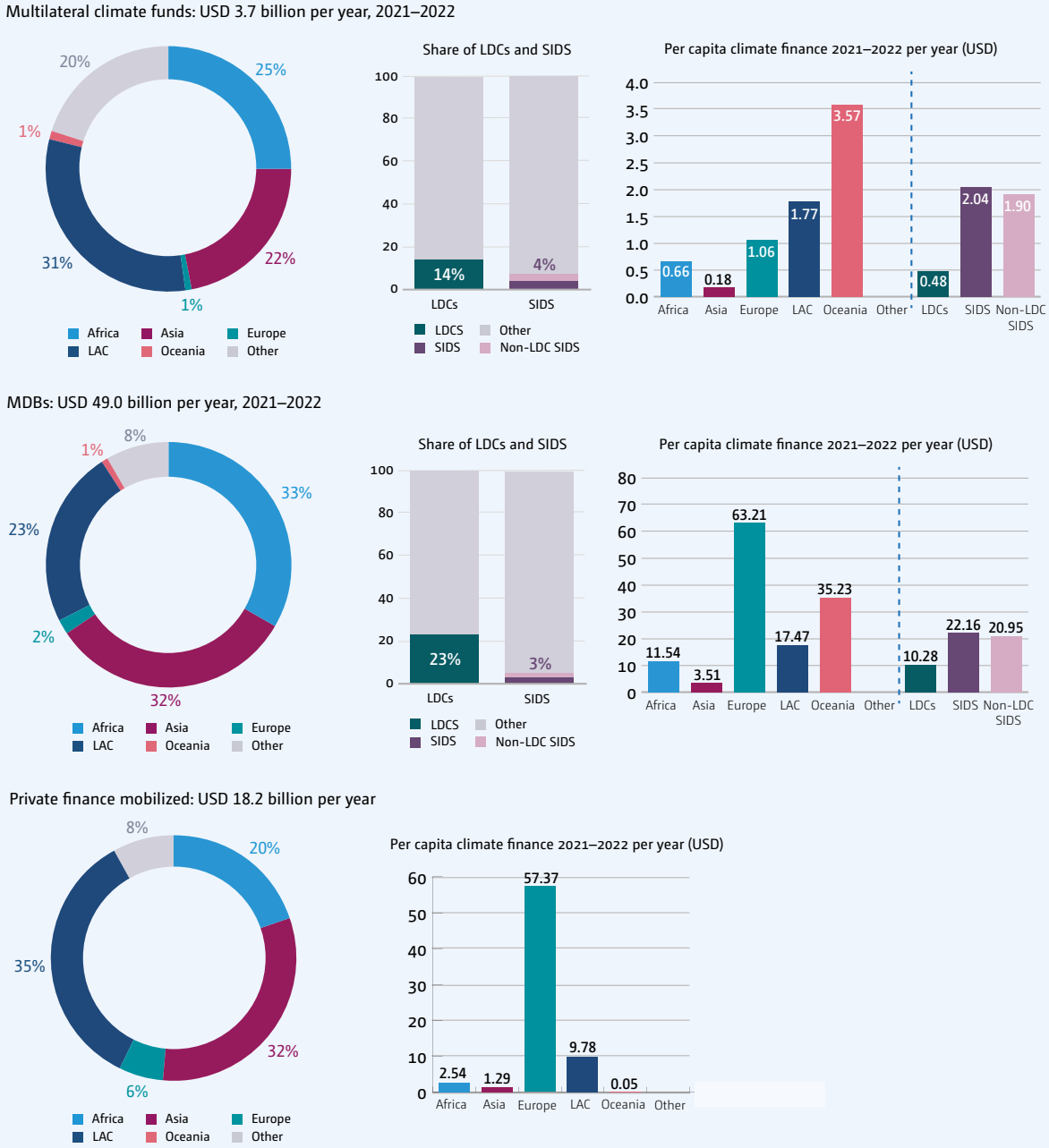
53) Available at https://docs.wfp.org/api/documents/WFP-0000154486/download/?_ga=2.55434859.1376676446.1721401891-392525344.1721401891.

ongoing on the role of international public climate finance to reduce the costs of insurance for the targeted beneficiaries.

3.2.3. Geographical distribution of climate finance from developed to developing countries

Figure 3.4

Geographical distribution of climate finance by volume and on a per capita basis by different channels in 2021—2022



Note: a United Nations Statistics Division regions (M49) classification is applied to provide more consistent regional breakdowns. Bilateral climate finance is not included as sourced from preliminary estimates from Parties for the preparation of the sixth BA. Preliminary estimates are partial and provisional and subject to change once official data are submitted by 31 December 2024. A significant proportion of preliminary data does not include instrument- or geographical-level information. Information on private finance mobilized to the LDCs and SIDS is not available for 2021–2022.

266. There are many climate-vulnerable countries in Africa and Africa is a major recipient region of international public finance flows, receiving, on average, 30 per cent of commitments through these channels in 2021–2022 (27 per cent in 2019–2020):

- Africa received 25 per cent of its total financing from multilateral climate funds, with the majority flowing into projects with multiple objectives (57 per cent) and projects for adaptation (20 per cent) and mitigation (23 per cent). Financing was evenly distributed in the form of concessional loans and grants, each accounting for 50 per cent of the total in 2021–2022, similar to the distribution in 2019–2020;
- From MDB resources in 2021–2022, 33 per cent of climate finance was committed to Africa. Of the total, 48 per cent was made available for adaptation, similar to 2019–2020. The remaining 51 per cent was made available for mitigation activities. Financing was mainly through debt instruments (73 per cent) and grants (26 per cent); this is comparable with 21 per cent in grants and 78 per cent in debt instruments in 2021–2022;
- Of private finance mobilized, Africa received 20 per cent. No further information is available on thematic or instrument breakdowns by region.

267. Asia was the second key beneficiary across the three public climate finance channels analysed, receiving, on average, 29 per cent of commitments through these channels in 2021–2022 (36 per cent in 2019–2022):

- Twenty-two per cent of multilateral climate fund finance in 2021–2022 supported projects in Asia, compared with 25 per cent in 2019–2020. Adaptation and mitigation accounted for 12 and 66 per cent respectively. Of the total, grants (35 per cent), concessional loans (27 per cent) and equity and others (27 per cent) were the major source of financing;
- Spending by MDBs in Asia accounted for 32 per cent of total MDB spending in 2021–2022. Out of this, 40 per cent went to towards adaptation. MDB spending on Asia is dominated by debt instruments (73 per cent), followed by grants (26 per cent);
- Of private finance mobilized, Asia received 32 per cent. No further information is available on thematic or instrument breakdowns by region.

268. Latin America and the Caribbean secured, on average, 21 per cent of climate finance committed in 2021–2022 across the three public channels of finance flowing from developed to developing countries (16 per cent in 2019–2022):

- Latin America and the Caribbean was the top recipient of financing from multilateral climate funds, with 31 per cent of those funds, the majority flowing into projects with multiple objectives (64 per cent) and projects for adaptation (14 per cent) and mitigation (22 per cent). Grants accounted for 29 per cent, with concessional loans accounting for 69 per cent. This is the inverse of 2019–2020, in which 69 per cent was provided in the form of grants and 27 per cent in the form of concessional loans;
- MDB climate finance to Latin America remained stable, at 23 per cent of total commitments in 2021–2022. Adaptation commitments accounted for 25 per cent (29 per cent in 2019–2020), while mitigation accounted for 67 per cent. Seventy-four per cent was in the form of debt instruments, compared with 69 per cent in 2017–2018 (much of the remainder was unspecified, owing to confidentiality reasons);
- Of private finance mobilized, Latin America and the Caribbean received 35 per cent. No further information is available on thematic or instrument breakdowns by region.

269. Europe, covering six non-Annex I Parties in the European subregions Eastern Europe and Southern Europe, received on average 2 per cent of climate finance committed in 2021–2022 across the three public channels of finance flowing from developed to developing countries. These six non-Annex I Parties are the Republic of Moldova (Eastern Europe) and Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia (Southern Europe):

- Europe received 1 per cent of multilateral climate fund financing, split between mitigation (80 per cent) and multiple objective (20 per cent) projects. Similar to 2019–2020, 54 per cent of the finance was in the form of grants and 46 per cent was in the form of concessional loans;
- MDB climate finance commitments in Europe accounted for 2 per cent of total commitments in 2021–2022, all in the form of debt. Adaptation accounted for 14 per cent of commitments in this time period, with the remainder committed to mitigation projects;
- Of private finance mobilized, Europe received 6 per cent. No further information is available on thematic or instrument breakdowns by region.

270. Oceania, including all Pacific island countries and territories that are Non-Annex 1 Parties to the Convention[54] receives on average 1 per cent of climate finance committed in 2021-2022 across the three public channels of finance flowing from developed to developing countries:

- Oceania received 1 per cent of the MCFs financing, split between mitigation (72%), adaptation (9%) and multiple objective projects (20%) with all in the form of grants.
- MDB climate finance commitments in Oceania made up 1 per cent of total MDB climate finance in 2012-2022. 83 per cent was adaptation focussed while 17 per cent was mitigation. 50 per cent was provided on a grant basis, the remainder being provided as debt instruments.
- For private finance mobilized, Oceania received 0.004 per cent. No further information is available on thematic or instrument breakdowns by region.

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

271. 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.

272. The LDCs have economic growth and development pathways that are strongly linked to climate-sensitive sectors. They have elevated vulnerability to and often poor ability to resist or rebound from shocks. Deteriorating conditions for accessing capital and basic service delivery is both caused by and results in, relatively weak institutions and governance (IPCC, 2022a; Cooper, 2020). There are currently 45 LDCs and the United Nations Committee for Policy Development reviews the list of the LDCs every three years for possible graduation from or inclusion to LDC status:[55][56]

- The finance approved in the LDCs by major multilateral climate funds is 14 per cent of total approvals in 2021—2022, which marks a decrease compared with the 2019—2020 (26 per cent). Commitments to adaptation make up 23 per cent similar to 29 per cent received in 2019—2020. Of the total, 56 per cent is provided as grants and 44 per cent as loans (stable since 2019—2020)
- MDB finance committed to the LDCs was 23 per cent of MDB climate finance in 2021—2022, comparable with 2019—2020. Of this amount, 57 per cent was committed to adaptation, a slight decrease from 57 per cent of 2019—2020 commitments to adaptation. Of the total provided to LDCs, 40 per cent was provided as grants, which is a significantly higher grant ratio relative to wider MDB climate finance as shown in figure 3.1 (see also table 3.1).

273. With largely ocean-based economies, SIDS suffer from high exposure to the impacts of climate change such as increased frequency and intensity of climate-related weather events and sea level rise. They share geographical features of small size and remoteness, that increase their sensitivity to climate shocks. Their nature has also led to relatively weak transport links and low economic integration and many SIDS have low private sector activity outside of the tourism industry. This has increased the costs of technology and, a number suffer structural governance and institutional challenges much like the LDCs, SIDS also suffer challenges to accessing finance (GCF IEU, 2020). There are 38 United Nations Member States that are SIDS and 20 non-United Nations members/associate members of regional commissions that are SIDS. A number of SIDS are also LDCs:[57]

- Major multilateral climate funds approved 4 per cent of total approvals for SIDS in 2021–2022, compared with 7 per cent in 2019–2020. This is a continued decline since 2017–2018 (10 per cent). Of the total approvals, adaptation accounted for 60 per cent, similar to 2019–2020. In 2021–2022, almost all the approvals from multilateral climate funds were provided in the form of grants (an increase from 89 per cent in 2019–2020);
- MDB climate finance committed to SIDS in 2021–2022 reached 3 per cent of total commitments, similar to the levels in 2017–2018. Of the total commitments of MDBs to SIDS in 2021–2022, 56 per cent was channelled to adaptation, similar to 2019–2020, and much higher than the total MDB

54) This excludes Annex-I countries Australia and New Zealand and a number of associated or dependent overseas territories of other Annex-I Parties.

55) Available at https://www.un.org/development/desa/dpad/least-developed-country-category/ldc-criteria.html

56) LDC status is determined by three inclusion criteria, notably GNI per capita of lower than 1,018 USD, and threshold scores on the Human Assets Index (HAI) measure of human capital and the Economic and Environmental Vulnerability Index (EVI).

57) Recalling that the analysis of bilateral finance flows includes only the SIDS that are eligible for ODA and so included in the OECD DAC CRS. As listed at https://whc.unesco.org/en/sids/, SIDS can also be LDCs: thus, the data sets are overlapping and should not be aggregated.

climate finance share to adaptation, as shown in table 3.1. Grant finance made up 41 per cent of MDB commitments to SIDS in 2021–2022, similar to the 43 per cent in 2019–2020 (table 3.2).

Table 3.1

Characteristics of international public climate finance flows to the least developed countries and small island developing States in 2021–2022 2021- by channel, theme and financial instrument

		Annual average	Area of support				Financial instrument		
		(USD million)	Adaptation	Mitigation	REDD-plus[a]	Cross-cutting	Grants	Loans	Other
Multilateral climate funds[b]	Total	3 708	16%	31%	3%	51%	37%	52%	12%
	LDCs	532	23%	9%	2%	66%	56%	44%	0%
	SIDS	139	62%	11%	0%	27%	99%	1%	0%
MDB climate finance[c]	Total	48 992	36%	62%	0%	2%	11%	75%	15%
	LDCs	11 437	57%	42%	0%	0%	40%	60%	0%
	SIDS	1 508	56%	41%	0%	3%	33%	67%	0%

Note: all values based on approvals and commitments. Some SIDS are LDCs and numbers should not be aggregated. Unspecified, global and multi-regional and multi-country projects are not included in this analysis.

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: 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 the Adaptation for Smallholder Agriculture Programme, AF, BioCarbon Fund, CTF, Forest Carbon Partnership Facility, FIP, Global Climate Change Alliance, GEF Trust Fund, GCF, LDCF, Partnership for Market Readiness, Pilot Programme for Climate Resilience, SREP, Special Climate Change Fund and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries.

c. MDB climate finance derived from the OECD DAC External Development Finance Statistics, climate-related development finance at the activity level data set recipient perspective. Eight non-Annex I Parties that are non-DAC eligible countries are therefore not reflected in this analysis.

Geographical distribution of climate finance from developed countries to developing countries relative to population

274. The increasing availability of granular country and project-level data on major channels of international public climate finance flows allows for the volume of public climate finance flows to be calculated relative to the size of populations across geographical regions. This assessment, however, is limited to the analysis of climate finance flows that are clearly identifiable within countries, regions or subregions, and a substantial share of global, multi-regional and multi-country projects have not been considered, owing to the inability to match climate finance flows with precise recipient populations. For the major multilateral climate funds, 20 per cent of total climate finance allocations in 2021–2022 were not considered in the analysis; for the MDBs, 8 per cent was unspecified. Table 3.3 provides an indicative overview of the per capita allocation of international public climate finance in 2021–2022 by United Nations subregion, measured in United States dollars per inhabitant.

275. The data on per capita climate finance do not adjust for differential purchasing power between countries, nor is the per capita measure able to consider the differing climate vulnerabilities and emissions of regions. The analysis is therefore not directly linked to regional climate financing needs. It does, however, provide one relative measure of climate finance flows (table 3.3):

- The major multilateral climate funds have approved climate finance at levels ranging from less than USD 0.01 per capita to USD 150.06 per capita, with a global average of USD 0.31 per capita;
- MDB climate finance commitments to the regions in 2021–2022 ranged from less than USD 0.01 per capita to more than USD 2,872.13 per capita, with an average of committed climate finance across regions of USD 6.86 per capita.

Table 3.2

International climate finance flows to developing countries relative to their population (United States dollars per capita)[a]

		Annual average (USD millions)	Min	Max	Average
Multilateral climate funds	Attributable Total	2,954	0.004	7,051.90*	0.45
	Africa	930	0.03	25.24	0.66
	Asia	806	0.004	44.79	0.18
	Europe	19	0.18	0.30	1.06
	Latin America	1 153	0.01	7,051.90c	1.77
	Oceania	45	0.04	0.04	3.57
MDB climate finance[b]	Attributable Total	44 904	0.006	2,872.13	6.86
	Africa	16 252	0.41	51.64	11.54
	Asia	16 252	0.01	63.23	3.51
	Europe	1 139	20.60	93.30	63.21
	Latin America	11 416	0.03	1,722.42	17.47
	Oceania	446	12.99	2,872.13	35.23

Note: all values based on approvals and commitments. Unspecified, global and multi-regional and multi-country projects are not included in this analysis.

a. Including Adaptation for Smallholder Agriculture Programme, AF, BioCarbon Fund, CTF, Forest Carbon Partnership Facility, FIP, Global Climate Change Alliance, GEF Trust Fund, GCF, LDCF, Partnership for Market Readiness, Pilot Programme for Climate Resilience, SREP, Special Climate Change Fund and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries.

b. MDB climate finance derived from the OECD DAC External Development Finance Statistics, climate-related development finance at the activity level data set recipient perspective. Eight non-Annex I Parties that are non-DAC eligible countries are therefore not reflected in this analysis.

c. This high per capita number is attributed to Dominica, owing to its small population

276. In many LDC and SIDS, development finance represents a major source of international financial flows and is a key pillar of public sector budgets (OECD and UNCDF, 2020)(OECD/UNCDF 2020)[58]. As such, information on per capita climate finance flows can be informative. Assessment of the volume of public climate finance flows relative to the size of populations in the LDCs and SIDS is limited to an analysis of climate finance flows that are clearly identifiable to these countries and attributable to these country groupings, however. Projects and programmes that span regions and sub-regions, or that are unspecified, are not considered. Table 3.3. illustrates per capita climate finance figures in SIDS and LDCs. It is worth recalling that the data on per capita climate finance do not adjust for differential purchasing power between countries nor account for the differing climate vulnerability and emissions of these country groupings. The analysis is therefore, not directly linked to climate financing need.

58) OECD/UNCDF. (2020). Blended Finance in the Least Developed Countries 2020: Supporting a Resilient COVID-19 Recovery. OECD Publishing, Paris. Available at https://doi.org/10.1787/57620d04-en.

Table 3.3

International climate finance flows to the least developed countries and small island developing States relative to their population

		(USD million)	Adaptation	Mitigation	REDD-plus[a]
Multilateral climate funds[a]	Attributable Total	2 954.25	0.00	7 051.90	0.45
	LDCs	531.71	0.00	453.90	0.48
	SIDS	138.67	0.06	453.90	2.04
	Of which non-LDC/SIDS	97.27	0.06	150.06	1.90
MDB climate finance[b]	Attributable Total	44 903.92	0.01	2 872.13	6.86
	LDCs	11 436.69	2.10	4 123.12	10.28
	SIDS	1 507.78	4.08	4 123.12	22.16
	Of which non-LDC/SIDS	1 072.68	4.08	1 747.08	20.95

Note: all values based on approvals and commitments. Unspecified, global and multi-regional and multi-country projects are not included in this analysis.

a. Including Adaptation for Smallholder Agriculture Programme, AF, BioCarbon Fund, CTF, Forest Carbon Partnership Facility, FIP, Global Climate Change Alliance, GEF Trust Fund, GCF, LDCF, Partnership for Market Readiness, Pilot Programme for Climate Resilience, SREP, Special Climate Change Fund and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries.

b. MDB climate finance derived from the OECD DAC External Development Finance Statistics, climate-related development finance at the activity level data set recipient perspective. Eight non-Annex I Parties that are non-DAC eligible countries are therefore not reflected in this analysis.

3.2.4. Additionality of climate finance provided

277. 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, paragraph 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". Broadly, the discussion of new and additional climate finance speaks to, among others, the continuity of overall ODA levels and its relation to climate finance spending as a subcategory, where concerns about inadvertent allocation conflicts exist, or additional, new, or higher commitments as compared to previous years(see also chapter 1.4 above).

278. The understanding of what is "new and additional" and how to put it into practice or assess it, continues to vary across stakeholders and Parties. NCs and the BR guidelines require developed countries to provide information on how they have determined that the resources provided to developing countries are "new and additional". Such information will also be necessary for developed country Parties to report under the ETF from 2024. In their BRs, Annex II Parties have provided this information with criteria including: whether funds represent new commitments or disbursements in a given year, whether funds went beyond a certain baseline year or whether funds went beyond the 0.7 per cent GNI pledge for ODA, illustrating the lack of a common understanding on what is considered "new and additional".

279. In their second biennial communications on ex ante information on climate finance in accordance with Article 9, paragraph 5, of the Paris Agreement, developed country Parties similarly defined financial resources committed or approved for disbursement as "new and additional" if they were "new and additional" to previously reported commitments or disbursements in, for example, NCs, BRs or other reports to the UNFCCC. New Zealand determined 800 million New Zealand dollars of its committed 1.3 billion New Zealand dollars (2022–2025) to be "new and additional" because it is additional to the 500 million New Zealand dollars

already committed under its international development cooperation budget, and the United Kingdom's intention to double its provision of climate finance to 11.6 billion pounds sterling for 2021–2022 to 2025–2026 is considered to be additional to its previous commitment for 2016–2017 to 2020–2021. Some Parties defined "new and additional" resources as those newly committed, allocated or disbursed for climate-related projects and programmes during a certain period of time. For example, Canada and Finland use 2009, the year in which developed country Parties committed to providing financial resources to developing countries under the Copenhagen Accord, as the baseline year from which to define climate finance as "new and additional". In addition, some Parties considered "new and additional" resources in the context of their ODA. Luxembourg, for example, determined financial support to be "new and additional" if it is additional to or exceeds its ODA commitments.

280. In the wider literature, some studies conclude that a substantial amount of climate finance accounted for does not constitute additional efforts based on taking a baseline comparison with the development of total ODA over time (since 2009) or the general 0.7 per cent GNI pledge for ODA by donor countries (Mitchell, Ritchie, and Tahmasebi, 2021; Hattle and Nordbo, 2021). In contrast, other studies find little evidence of repurposing or rebadging of aid between categories of development expenditures, given that econometric analysis closely associates increases or decreases in climate finance to a given sector with increases or decreases in total OOF towards those sectors (Miller et al., 2023) . Assessments of climate finance flows are, however, increasingly discussing the quality and adequacy of climate-related and other developmental expenditures, including, for example, discussion on financed activities and choice of instruments or on the provision of climate finance based on developed country characteristics (Bhattacharya et al., 2022; Bos, Gonzalez, and Thwaites, 2021; Pettinotti et al., 2023).

3.3. Effectiveness of climate finance: access, ownership and impacts

281. It is not just the quantity of climate finance that is important but also how well that finance achieves its objectives; its quality. 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 as highlighted as key elements of effectiveness of means of implementation and support and finance flows in the global stocktake technical synthesis[59] 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 longstanding frameworks that have been developed by researchers to improve understanding of the effectiveness of climate finance (Brown et al., 2011; Juden and Mitchell, 2021). (Brown et al., 2011; Juden and Mitchell, 2021).

3.3.1. Access to climate finance

282. Efficient access to climate finance is an important priority. The Paris Agreement, states that "the institutions serving this Agreement, including the operating entities of the Financial Mechanism of the Convention, shall aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States in the context of their national climate strategies and plans". Access to climate finance has remained challenging, however, for developing countries and their institutions (Terfassa et al., 2023). In the climate finance delivery plan progress report, led by Canada and Germany, it was recognized that multiple barriers to access fundamentally impacts the effectiveness of climate finance.[60]

283. While no overarching framework has formally defined what access to climate finance encompasses, it has been characterized by recipient and provider actors, the former encompassing sources and channels, the latter encompassing intermediaries, recipients and beneficiaries, over which the stages of access could be overlaid including pre-conditions for access, eligibility to access, approval processes and post-approval processes (Robertson, 2024), and from a recipient perspective as either dealing with issues of adequacy and predictability (such as financial instruments, balance between adaptation, and mitigation and overall scale), or dealing with more process-based issues (such as project preparation, articulations of need, fiduciary standards, costs and speed (figure 3.5; CFAS, 2021).

284. Chapter 3.2 above highlighted elements of adequacy

59) https://unfccc.int/documents/631600
60) https://www.auswaertiges-amt.de/blob/2560806/8cc5034f86da07811f8cb6adacba1130/neuer-inhalt--1--data.pdf

and predictability in access, including data on funding availability and financial instruments. It did not address the nature of macro-economic conditions and impact on capital market access. These were included in the global stocktake technical synthesis, which emphasized how opportunities for financing mitigation and adaptation can be enhanced by enabling conditions and overcoming constraints,[61] while the global stocktake outcomes went further by recognizing the connection between developing countries having sufficient fiscal space, and climate action and advancing on a pathway towards low-emission, and climate-resilient development.[62] As noted in the fifth BA, the considerations related to debt sustainability and the relationship with the different financial instruments used to provide and mobilize climate finance have become more prominent in the light of the COVID-19 pandemic and high levels of public spending it has required, as well as the subsequent energy crisis.

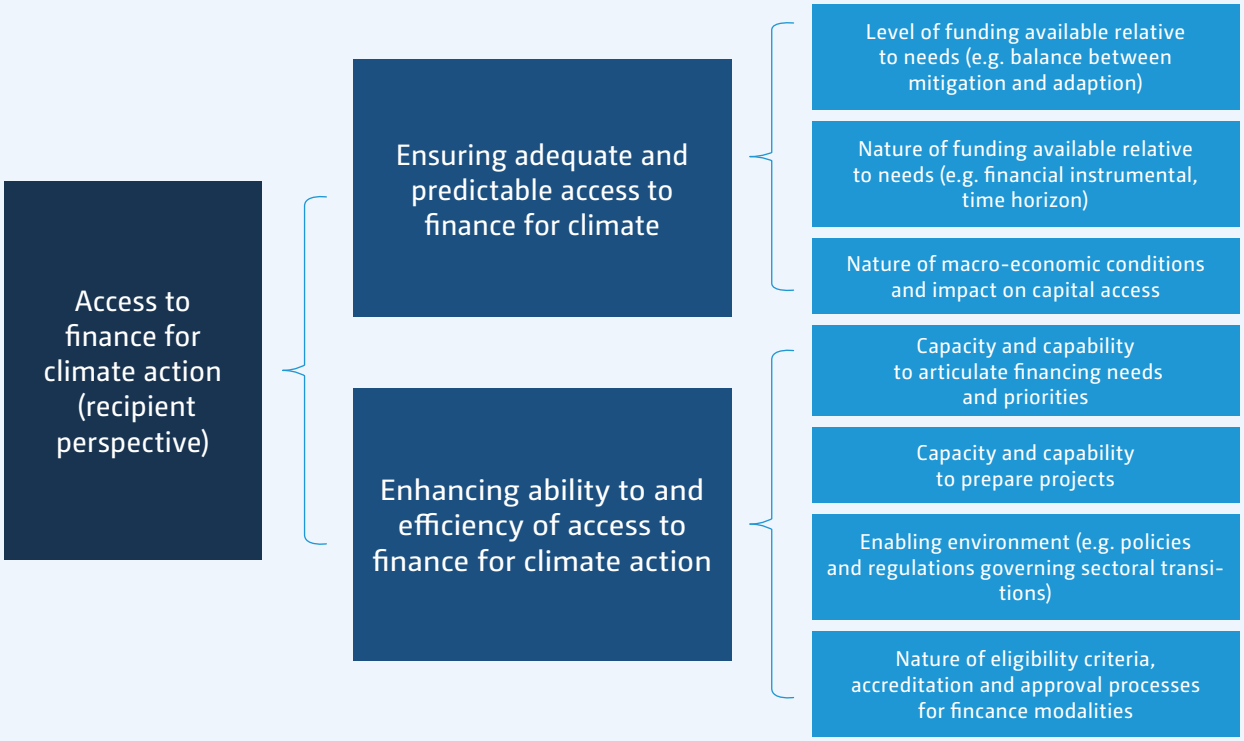
285. As at November 2023, 26 low-income developing countries were identified as at high risk of debt distress – the risk of an inability to service debts – 10 of which was considered already debt-distressed. UNCTAD estimate public debt in developing countries as USD 29 trillion, or 30 per cent of the global total (UNCTAD, 2024)[63]. UNCTAD estimate public debt in developing countries as USD 29 trillion, or 30 per cent of the global total (UNCTAD, 2024). Debt distress, however, cannot be linearly related to indebtedness which is often measured as the total debt or debt-to-GDP ratio, or debt service thresholds. Advanced economies generally register higher public debt stocks in total, and in relation to GDP, than emerging markets and low- or middle-income developing countries. Yet many developing and least-developed countries are currently facing a situation of debt vulnerability owing to their lower debt carrying capacity. This is often driven by underlying factors such as weaker policy and institutional capabilities, stagnant public revenue development, slow macroeconomic growth, and high exposure to rollover risks from the financial markets. While advanced economies managed public spending pressures during the COVID-19 pandemic with interest rate changes and central bank purchase of sovereign debt, many low-income developing countries faced limited access to funding and rising borrowing costs (Gaspar, Medas, and Perelli, 2021; IMF, 2023a). Adjustments to advanced economy monetary policies as their economies recover and globally rising interest rates have further exacerbated the risk of debt distress in some developing countries (IMF, 2023a). International cooperation can support countries under fiscal pressures and immediate debt distress to address the provision of public goods, step-up actions to ensure energy security and continue on a transition to low-emission, climate-resilient development pathways, and a number of initiatives are underway and solutions are being proposed (Box 4.X).

286. The remainder of chapter 3.3.1 considers options to address more process-based issues of climate finance access including those that pertain to the ability of developing countries to articulate demand for climate finance and those that determine supply of climate finance from climate finance institutions, including: support for climate finance readiness, support for project preparation, supporting access to climate finance providers and accreditation to and the pace and cost of finance flow through multilateral climate funds. A German Agency for International Cooperation study on promoting access to climate finance, echoed in Canada's and Germany's climate finance delivery plan progress report, further highlighted the role of improved communication in pursuit of enhanced access, including sharing best practices, lessons learned and experiences, from both provider and recipient perspectives.[64] In the absence of meta- reports that address wider issues of access to the various sources and channels of climate finance, aspects of this section largely focus on a sub-set of the multilateral climate change funds, as a key part of the climate finance architecture. This is complemented by information on bilateral and MDB flows where available.

61) https://unfccc.int/documents/631600
62) https://unfccc.int/sites/default/files/resource/cma5_auv_4_gst.pdf
63) Available at https://www.imf.org/external/pubs/ft/dsa/dsalist.pdf
64) Available at https://www.auswaertiges-amt.de/blob/2560806/8cc5034f86da07811f8cb6adacba1130/neuer-inhalt--1--data.pdf

Figure 3.5

Exemplary elements that define access to finance



Source: based on CFAS, (2021) with authors' additions.

Support for climate finance readiness

287. 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 (GCF, 2017; GIZ, 2012). 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, 2017), is relevant for the mobilization of all finance sources, including international and domestic public, private and blended.[65] Almost every multilateral climate fund has a branch supporting activities with which they support capacity-building in developing countries to access and use climate finance.

288. The GCF Readiness Programme approved USD 528 million for 709 readiness requests between 2015 and 2023 (as at July 2023). The AF's Readiness Grants have a much smaller budget and by mid-2023 the AF had approved 46 grants totalling USD 1.8 million. The AF has also integrated its South–South Cooperation Grants into the readiness package of grants in order to streamline support facilities and capacities. While the GEF does not use the concept of readiness, it does support enabling activities, which are considered here to fall under the readiness heading (and is inclusive of GEF efforts) towards supporting project preparation. Such enabling activities with climate change mitigation relevance have reached just over USD 600 million (for 477 enabling activities) since the GEF's inception in 1994. The review of these readiness efforts has over time revealed the need to focus on climate finance access more broadly in developing countries and not just on access to the funds themselves, in addition to allowing developing countries more flexibility in the deployment of resources (Amerasinghe et al., 2017).

Support for project preparation

289. A number of multilateral climate change funds also have facilities and initiatives that support project

65) "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.

preparation. The GCF has a dedicated Project Preparation Facility through which accredited entities can get financial and technical assistance with project proposals. Micro and small-size projects with values up to USD 1.5 million are prioritized. In its update to the Project Preparation Facility programme, the GCF decided to make available up to USD 3 million on a case-by-case basis for regional or multi-country projects and/or innovative projects of complex feasibility and requiring technical studies. In 2023 it built a roster of consultancy firms that can directly provide project preparation services to direct access entities at their request. For GCF-2, an expected volume of USD 90.3 million has been allocated to the Project Preparation Facility modality.[66]

290. The AF has streamlined its project preparation support and has merged the Project Formulation Assistance with its Project Formulation Grant offer.[67] In addition, the AF initiated in its 2018–2022 strategy the onset of Project Scale-up Grants under its Readiness Programme for Climate Finance. The grants, for up to USD 100 000 per project, provide readiness funding to national implementing entities to support project and programme planning, design and development for scaling up, expanding or replicating AF projects or programmes that are currently under implementation.[68]

291. The way in which multilateral climate funds support project preparation varies. In the case of the CIF of the World Bank, for example, funding is allocated to a country in order to create investment plans (before constituent projects and programmes have been approved). There also exist initiatives and programmes outside of the UNFCCC process that can play a role in supporting project preparation

Supporting multilateral climate fund accreditation and wider climate finance access

292. 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. national designated authorities and direct access entities), which 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 has proved a challenging barrier to access to overcome for many countries despite the growing ability of institutions in developing countries to meet the fiduciary, environmental and social safeguards required and investments in enhancing processes and institutional capacities (CFAS, 2021; Terfassa et al., 2023).

293. At their inception, most multilateral climate funds were accessed through international partner institutions such as United Nations' agencies and MDBs. Since 2008 there have been efforts to diversify the modalities of access in order to give institutions in developing countries climate finance access. Recent years have seen growth in the accreditation of regional and national institutions, as well as non-governmental implementing entities, including from the private sector and civil society to the multilateral climate funds. Much of this increase has been driven by the AF through both supporting enhanced direct access, whereby developing country based accredited institutions made their own decisions about programming resources, and simplified approval processes. Direct access projects of the AF have been found to have a stronger community focus and increased local ownership (Manuamorn and Biesbroek, 2020).

294. The GCF has also been responsible for driving up the share of regional and national entities as a result of fast-track accreditation procedures for entities already accredited by other funds (such as the AF). The GCF also 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. In 2023, the GCF launched a pilot-phase for the project-specific assessment approach to allow a one-off project submission without needing to go through a formal accreditation process, in order to prioritize proposals from regional, national and subnational entities.

295. In 2023 there were 143 accredited entities to the major multilateral climate change funds, a 16 per cent increase from 123 in 2020 (figure 13). Despite growth in national and regional implementing entities, the climate finance approved for implementation through these entities was 15 per cent (8 per cent was approved for national entities and 7 per cent regional) for the 2021—2022 (figure 14). This is a slight drop compared with 18 per cent of approved finance in 2019—2020 (8 per cent was approved for national entities and 10 per cent for

66) Available at https://www.greenclimate.fund/sites/default/files/document/17-ppf-revised-operating-modalities-activities-and-funding-gcf-b37-05.pdf
67) See decision B.37/1(e).
68) Available at https://www.adaptation-fund.org/readiness/readiness-grants/project-scale-grants/.

regional entities).

296. As at July 2023, the SAP pipeline of 111 public and private sector proposals constitutes 25 per cent of the total GCF pipeline, and the current SAP portfolio totals 29 approved projects amounting to USD 502 billion in GCF-funding(GCF, 2023b). While it signals robust demand for the SAP modality, an independent review of the latest SAP policy update (that included among others the development of SAP programming guidance and a SAP appraisal toolkit) arrived at a preliminary conclusion that the SAP process has so far not meaningfully reduced the application burden and internal review time of projects, noting that the introduction of approvals in between regular Board meetings or delegation to the Executive Director could provide significant efficiency gains (GCF IEU, 2023). The AF pioneered direct access, and the GCF has adopted the concept as it has evolved. Enhanced direct access ensures that projects are managed directly by developing countries, elevate issues of climate change to the national level, amplify stakeholder voices and help to sustain institutional knowledge (AF, 2017). It can also reduce the transaction costs of climate action (Masullo et al., 2015). Similarly, SAP are special application processes for small-scale projects and programmes, particularly for smaller entities. In the case of the GCF the value of these projects is up to USD 25 million of GCF financing, an increase from USD 10 million previously. The change in eligible funding volume came in an update to the SAP in 2022 that also includes a simplified GCF-internal funding proposal review and approval process (GCF, 2022). As at July 2023, the SAP pipeline of 111 public and private sector proposals constitutes 25 per cent of the total GCF pipeline, and the current SAP portfolio totals 29 approved projects amounting to USD 502 billion in GCF-funding(GCF, 2023b). While it signals robust demand for the SAP modality, an independent review of the latest SAP policy update (that included among others the development of SAP programming guidance and a SAP appraisal toolkit) arrived at a preliminary conclusion that the SAP process has so far not meaningfully reduced the application burden and internal review time of projects, noting that the introduction of approvals in between regular Board meetings or delegation to the Executive Director could provide significant efficiency gains (GCF IEU, 2023).

297. Contrary to the accredited entity design of the multilateral climate funds, access to MDB climate finance is possible through direct funding modalities, most often without an intermediary institution. Eligibility criteria for MDB membership or as a borrowing country differ and are often unspecified with varying criteria and graduation policies applying in particular for those MDBs that offer both concessional and non-concessional lending windows (Engen and Prizzon, 2018).Eligibility criteria for MDB membership or as a borrowing country differ and are often unspecified with varying criteria and graduation policies applying in particular for those MDBs that offer both concessional and non-concessional lending windows (Engen and Prizzon, 2018). There is no one standard process for access to MDB climate finance. MDB application procedures most commonly require a project description, feasibility study, project ownership and project implementation arrangements, cost estimations and a risk analysis, following the guidelines of the individual institutions. MDBs have however, aligned their definitions of eligible activities for climate change mitigation and adaptation finance (see chapter 1.3 above) providing an indication of expectations for implementing capacities and the level of detail required for financing projects.

298. Bilateral climate finance channels are even more diverse and often less transparent than MDBs and multilateral climate funds in their access processes. Climate finance providers often have systems linked to the OECD DAC system and eligibility therein which is linked to income classifications, reviewed regularly. There are further motivations for bilateral provision of climate finance that can influence bilateral climate finance access, including historical or tactical reasons (Colenbrander et al., 2023)While there are many models, some of which are application based, bilateral funds can sometimes be disbursed faster and more tailored to country- rather to than fund-specific goals. Bilateral providers are able to replicate direct access modalities for national institutions in recipient countries, along the model pioneered by the AF and GCF. The IKI Small Grants modality enables direct climate finance access through the international calls window, which provides small-scale funding directly to regional national or local organizations, and through the funding institutions window, which is dedicated to increasing the capacities of regional or national institutions to implement climate projects, with up to EUR 850,000 per institution, for example. Relative to the larger financing volumes of IKI thematic and country calls, these allocations remain small, however. The IKI Small-Grants programme allocations for 2019-2025 are EUR 11 million to the

international calls funding window, and EUR 5 million towards the funding institutions window.[69]

299. Next to engaging on host country policy and enabling environments and capacity-building initiatives, individual bilateral providers have taken actions regarding enhancing a focus on adaptation finance in their allocation strategies (Germany, Sweden, United Kingdom,), streamlining approval processes for small- to medium-sized projects (United Kingdom), or institutionalizing bilateral climate and development partnerships with climate finance as one bloc (Germany). Emerging lessons learned include sustaining government ownership for climate policies and initiatives, fostering coordination among the diverse set of international partners to implement programmatic approaches, and facilitating the participation of private finance while ensuring public debt sustainability in developing countries.

300. Climate finance providers have acknowledged that more focused work continues to be required for enhancing access to climate finance, trough reducing administrative burden and easing application processes and timelines.[70] A 2022 study (GIZ, 2022) commissioned by Canada and Germany found several commonalities in views among climate finance practitioners from provider and recipient perspectives regarding strengthening existing initiatives and structures, with direct access entities as a top priority, tackling the lack of human resources and capacities in developing countries to access climate finance and conduct project development, and better aligning climate finance processes within recipient countries in parallel with more efficient coordination. (GIZ, 2022) commissioned by Canada and Germany found several commonalities in views among climate finance practitioners from provider and recipient perspectives regarding strengthening existing initiatives and structures, with direct access entities as a top priority, tackling the lack of human resources and capacities in developing countries to access climate finance and conduct project development, and better aligning climate finance processes within recipient countries in parallel with more efficient coordination.

301. The Taskforce on Access to Climate Finance, established at COP 26 with the participation of provider and recipient countries of climate finance, in 2022 and 2023 initiated work in five pioneering countries on a more programmatic approach to climate finance planning and delivery at the national level, and at the system level, fostering coordinated approaches among bilateral and multilateral DFIs (NDC Partnership, 2023)

Pace and cost of delivering climate finance

302. Data from the multilateral climate funds can be used to shed light on 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. After pledges are made to multilateral climate funds, those funds then need to be provided to the funds in question, before being committed to project activities and then disbursed. The pace at which climate finance moves from pledge and approval needs to be understood in the context of the climate funds' differing approaches and modes of delivery, however. While the AF accepts pledges on a rolling basis, the GCF raises funds at specific periods. For its second replenishment (GCF-2) period a total of 31 countries including Israel, Mongolia and the Republic of Korea, have announced pledges for a total amount of USD 12.83 billion, with confirmed contributions of USD 3.92 billion as at 31 January 2024.[71] This compares with around USD 10 billion for the GCF-1 replenishment period and USD 10.3 billion (of which USD 9.3 billion was confirmed) in the initial resource mobilization period.

303. After funds have been committed to projects, those funds are then disbursed for implementation, at which point legal agreements and the project financial structure are designed and agreed. Reporting on the life cycle of climate finance varies between the multilateral climate change funds, with less transparency in disbursements than approvals. Funds also do not use terms consistently; 'to be disbursed' may reflect that the funds have not been released fully or partially for ongoing or committed projects, or if there are no data on whether the funds have been released. Based on the best available data, of the financial pledges made to the UNFCCC funds, 62 per cent has already been committed to project activities and 27 per cent of pledges remain to be committed (figure 3.8). These data do not include reflows of interest or debt service payments, which in most cases then become available for new project funding. As at the end of 2023, the GCF had recorded USD 163 million in cumulative reflows of its loan portfolio (GCF, 2024b).

304. Figure 3.8 further illustrates the costs associated

69) See https://www.germanclimatefinance.de/2023/06/14/direct-access-to-german-climate-finance-expanding-pioneering-work/

70) See Climate Finance Delivery Plan Progress Report: Advancing Ten Collective Actions. Available at https://www.auswaertiges-amt.de/blob/2560806/8cc5034f86da07811f8cb6adacba1130/neuer-inhalt--1--data.pdf.

71) Available at https://www.greenclimate.fund/sites/default/files/document/2024-status-pledges-website-jan-31.pdf.

with climate finance access through the multilateral climate change funds. These costs refer to the costs of managing the fund as a whole, including board meetings, stakeholder engagement efforts, project screenings and evaluations, and implementing entity fees, which cover the costs of intermediary organisations in managing approved projects and programmes. While the funds adopt different approaches and are therefore hard to compare with respect to the appropriateness of administrative and implementing costs it is in the interest of both contributors and beneficiaries to maximize the efficiency of the multilateral climate change funds whose costs have collectively reached USD 3.3 billion over the past decade.

305. The process of accessing climate finance, including becoming accredited and the endorsement of investment plans and projects, can be lengthy. For the GCF, which is now by far the largest of the multilateral climate change funds, mean project proposal approval times have improved considerably in GCF-1 as compared with the initial resource mobilization period, yet progress is uneven depending on the accredited entity type and access modality. Analysis from the Independent Evaluation Unit suggests that for an international accredited entity, the average approval duration was reduced from more than 750 days down to more than 250 days in 2021, while it remains at an average of more than 500 days for domestic accredited entities(GCF IEU, 2023). progress was made by the GCF to reduce the average approval time of readiness proposals from 441 days at its inception to 106 days in 2021. It is also notable that while the average processing time through the standard project application modality was reduced over time, SAP did not achieve processing gains and hence registers similar approval duration. Since 2020, the AF has registered significantly longer approval processes. The average time from first submission to project approval was six months in fiscal year 2020, which increased to 21 months in fiscal year 2023, compared with the AF target of nine months. The 2023 AF Annual Performance Report notes different factors, such as pending implementing entity reaccreditation, pending funding for approval, and delays of up to one year between the submission of a concept note and full project proposal, as reasons for increased approval times (AF, 2023).

Local level access to climate finance

306. There is widespread recognition that increasing domestic, subnational- and local-level access to climate finance, including towards local, underserved and Indigenous Peoples, communities and organizations can enhance the quality, effectiveness and impact of climate finance (IPCC, 2023a; UNEP, 2023a; CPI and GCA, 2023; Castro and Sen, 2022). The literature has shown for example, that the AF domestic accredited entities have exhibited greater community focus and increased local ownership compared with indirect entities (Manuamom and Biesbroek, 2020).

307. Available information on the scale and quality of climate finance for the local level remains limited, with no systematic tracking and reporting methodologies. Tracking the flow of climate finance to the local level would generally require more data transparency on project and programme processes and intermediaries (Soanes et al., 2017). The IPCC (2021), however, indicate that very little climate finance is reaching local communities and several interlinked challenges to local level access to climate finance have been highlighted (IPCC, 2022b; Westoby et al., 2021; Patel et al., 2020; Omari-Motsumi, Barnett, and Schalatek, 2019; Tye and Suarez, 2021). This includes:

- Current climate financing is largely channelled through multilateral implementers, rather than agencies that are closer to local communities. This reflects the higher perceived and real risks of fund management, and the higher transaction costs of decentralized projects which reduce their attractiveness to funders but also reflect the difficulties of local organizations in meeting the fiduciary standards of some climate finance modalities;
- Inadequate consideration of local agency in programme design. Many climate change planning processes start at the national level. Furthermore, few climate finance modalities have clear definitions of local stakeholders and/or how they need to be engaged (CBI, 2020). Over time, examples of sub-national and local engagement and participation in climate change planning are emerging, however, including those that support local level capacity to report on climate risks (and reduce scientific jargon, for example).

308. Bilateral and multilateral providers can unlock local level climate finance through two primary modalities: small grants programs and intermediated finance. Small grants programs are aimed at providing small volumes of climate finance on a grant (or concessional loan) basis to subnational and local-level organizations or actors. Procedures and modalities are ideally designed to be adjusted to the respective capacities and to minimize the documentation and bureaucratic burdens of the actors, entities or communities receiving the finance. Intermediated finance includes that delivered through

banks, non-banking FIs, leasing companies, funds and other financial intermediaries to finance third parties or economic activities that are best positioned to assess the respective national, local and sector-level risks and opportunities for local-level and small-scale climate projects, enable local currency lending, conduct due diligence, and accompany project implementation and monitoring and evaluation (Fuchs et al., 2021; Chin, Bagnera, and Pinko, 2023).

Figure 3.6

Time series on accredited implementing entities of multilateral climate funds

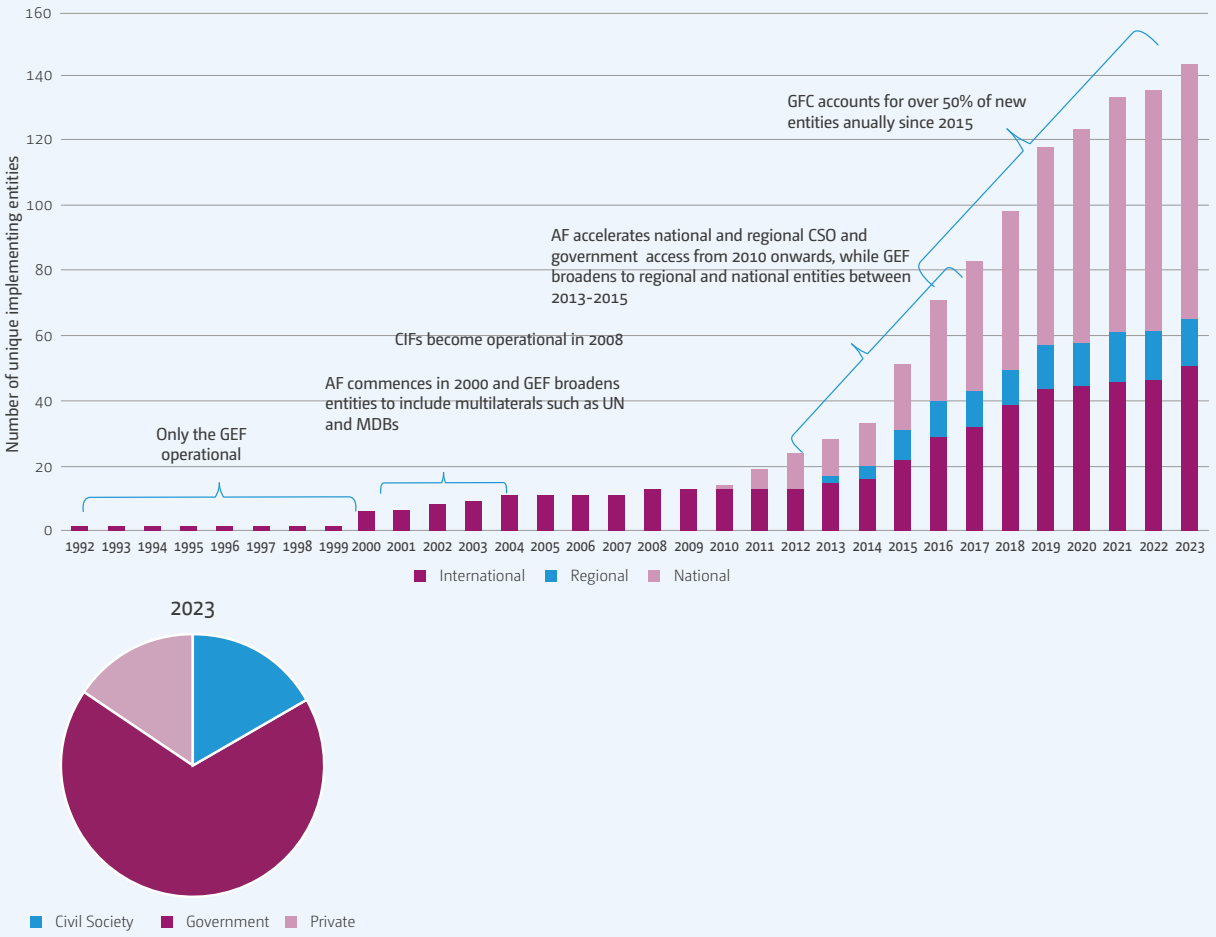


Figure 3.7

Percentage of climate finance approved through different types of accredited implementing entities

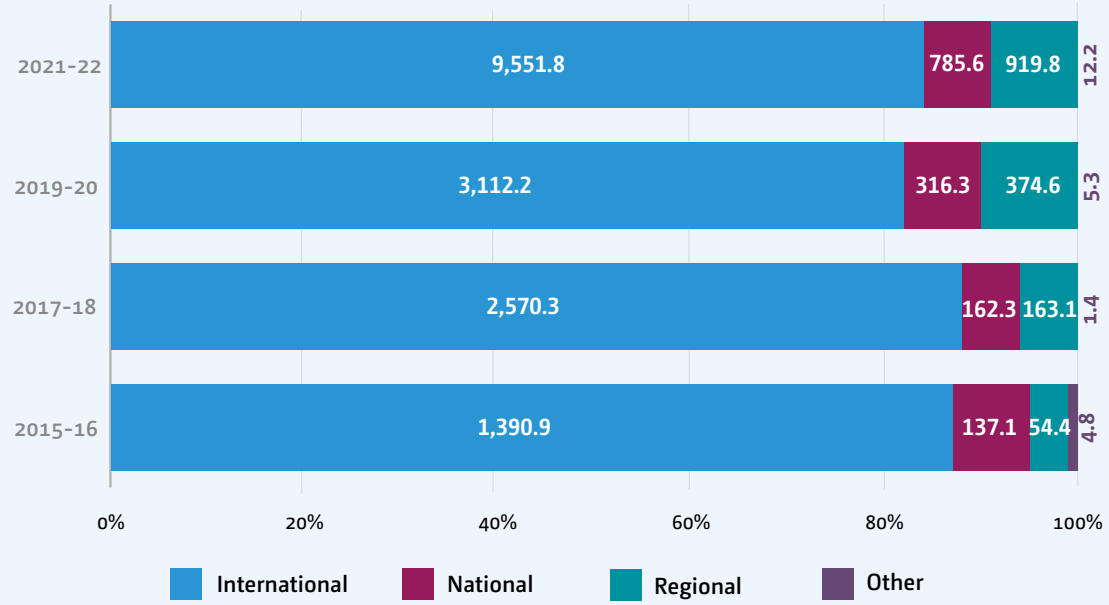


Figure 3.8

Cumulative pledges, project commitments and disbursement of climate finance (millions of United States dollars) through selected multilateral climate funds since 2001

*Note: data as at 21 March 2024 represent cumulative finance flows for the period 2001–2024. GEF climate change focal area pledges, project commitments and disbursements are considered for the GEF-5–GEF-8 commitment periods (July 2010 to March 2024). During that same period, significant amounts of cross-cutting environmental and climate-related financing were channelled through other GEF focal areas, which are estimated at around USD 4.247 billion project commitments with some climate relevance, of which USD 2.626 billion has been disbursed. The GEF aims to ensure that across operations, 80 per cent of all GEF funding commitments include direct or indirect climate benefits.

Source: World Bank Financial Intermediary Funds website, as at March 21 2024. Available at https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/funds; GEF (2024).

3.3.2. Ownership

309. In the context of climate finance, ownership often refers to the active engagement of stakeholders from ministries and other governmental bodies, 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.

310. The various channels of international public climate finance continue to encourage country ownership. As noted in Section 3.3.1 there are a variety of support processes for climate planning and climate finance access by countries and sub-national or regional institutions. The multilateral climate change funds continue to require letters of no objection from national designated authorities. The funds are also accrediting more diverse entities: particularly private finance entities. Bilateral providers and MDBs also have processes to establish and maintain country partnerships and strategy documents, updated periodically to support country ownership and priorities. The MDBs are developing a joint-platform to support countries' long-term strategies while in their joint viewpoint note that following the meetings in early 2024, the MDBs noted the strengthening of country-level collaboration as one of five critical areas in which they could commit to action.[72]

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

311. 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 IPCC (AR6 Summary for Policymakers) notes enhanced international cooperation, including, amongst others, aligning finance flows with ambition levels and funding needs. The importance of basing support within national priorities, as well as national institutions, is enshrined in the principles for ensuring the effectiveness of international assistance for developing countries.

312. Government 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 more than 5000 climate change-relevant laws worldwide.[73] In-session workshops on long- term climate finance organised by the UNFCCC secretariat in 2017 and 2018 explored such engagement, with various layers of capacity noted as needed to access climate finance at the national level. The adoption of a whole-of-government approach to climate finance has also emerged as a key finding from the first Needs Determination Report of the SCF and can require capacity-building for key ministries in countries (SCF, 2021a). Increased engagement in ministries responsible for strategic investment and financial management decisions at the national level is also being seen: the Coalition of Finance Ministers for Climate Action, published, in 2023, 15 transformative actions that exist across ministry of finance core functions and capabilities (see also chapter 4.4.3 below)[74]

313. The Convention, under Article 4, paragraph 3, notes that in implementing the commitment of developed countries to provide financial resources for developing countries, consideration must be given to the specific "needs and concerns of developing country Parties". Furthermore, Article 9, paragraph 3, highlights that the mobilization of climate finance by developed countries should take into account the needs and priorities of developing country Parties.

314. Despite the availability of more information, the incompleteness of data from both the top-down and bottom-up estimations challenges assessment of the alignment of climate finance flows with the climate finance needs of developing countries (Kowalzig and Guzmán, 2023). The facilitation of improved bottom-up country and regional level frameworks for the identification and costing of climate finance needs has been identified ((Stout, 2022)), particularly as top-down models have differing assumptions, that make comparison of costed needs estimates complex (Tan, Pettinotti, and Watson, 2024)[75]. Further information is available in the second Needs Determination Report of the SCF.[76]

315. In the context of the recently agreed global stocktake and Parties' being in the process of updating

72) https://www.worldbank.org/en/news/statement/2024/04/20/multilateral-development-banks-deepen-collaboration-to-deliver-as-a-system
73) See Climate Change Laws of the World, available at https://climate-laws.org.
74) Coalition of Finance Ministers for Climate Action (2023) https://www.financeministersforclimate.org/sites/cape/files/inline-files/Key%20Messages%20Guide_%20NLD_ID_3.pdf
75) Research publication by Tan et.al is forthcoming.
76) Available at https://unfccc.int/topics/climate-finance/workstreams/needs-report

their NDCs in 2025, the GCF and the NDC Partnership announced at COP28 the onset of the Climate Investment Planning and Mobilization Framework. The framework will respond to the needs of developing countries to translate their climate ambition into tangible implementation on the ground and attract the required finance by bridging the gap between public policy and financial actors. The framework will offer guidance to and supports countries along six stages of investment planning and finance mobilization, notably: enhancing investment planning and mobilization capacity, needs identification and prioritization, developing financing strategies, programming with financial partners, funding proposal development and project implementation.[77]

316. Pursuant to Article 9, paragraph 5 of the Paris Agreement, developed country Parties are required to submit biennial information on ex-ante climate finance including the information specified in the annex to decision 12/CMA.1. Other Parties providing support are encouraged to submit such information voluntarily. In response to the mandate, developed country Parties submitted the first and second biennial communications in 2020 and 2022, respectively. The secretariat prepared the compilation and synthesis of the first and second biennial communications submitted by the Parties for consideration at the third and fifth sessions of CMA and the twenty-sixth and twenty-eighth sessions of COP respectively and to inform the global stocktake

317. The compilation and synthesis include information contained in the submissions made by 35 Parties in which all 35 Parties provided information on financial support. While 30 Parties provided both ex-ante and ex-post information, five Parties provided only ex-post information. Most Parties detailed the total financial support provided and planned, along with project-specific details. Many Parties reaffirmed their commitment to mobilizing USD 100 billion annually from 2020 to 2025, with several increasing their projected public financial resources and some aiming to double contributions. A few reiterated existing commitments and indicated they were on track, while others offered new quantitative information. One Party reported a decrease in projected financial support.

318. In the second biennial communications, Parties detailed efforts to double climate finance for adaptation by 2025, aiming to balance mitigation and adaptation. Several committed to at least doubling adaptation finance, while others highlighted efforts to achieve this balance, with some allocating more than half of their bilateral support to adaptation. Some Parties provided more detailed information on financial support through multilateral channels, especially to UNFCCC funds compared with the first biennial communication. The submissions also gave information regarding Parties' contributions to the GEF, AF, GCF, and LDCF, reflecting increased commitment.

319. Parties communicated ongoing efforts to consider the needs and priorities of developing countries by involving national governments, developing tailored programmes, and focussing their support on implementing projects identified in national reports such as the NDCs, NAPs, and LT-LEDS. More Parties than before reported on actions to align finance flows with low-emission, climate-resilient development, emphasizing the importance of mobilizing private finance for adaptation. Efforts to support developing countries in mobilizing finance from diverse sources were noted, with some providing quantitative data on private finance and detailing the various funds and platforms used.

320. Parties cited budgetary and parliamentary approval requirements alongside national socioeconomic conditions as key barriers to communicating information on the projected levels of climate finance. Other challenges are related to national socioeconomic conditions and identifying programmes and priorities that will ensure flexibility and responsiveness in terms of meeting developing countries' needs.

321. National systems for tracking and spending climate finance

322. The ability of domestic financial systems to absorb, and then spend, international climate finance has been another focus of efforts towards ownership. National institutions and mechanisms to track climate finance can both pursue country ownership and serve as an intermediary between international providers and national recipients of climate finance. National systems can refer to both the channelling of international climate finance through national budgeting and financial management systems, including through direct budget support, and through the creation of institutions such as national climate funds.

323. As outlined in chapter 1.3.3 above there has been a

77) See https://ndcpartnership.org/sites/default/files/2023-12/gcfndc-partnershipclimate-investment-planning-and-mobilization-frameworkconsultation-draft.pdf and https://www.greenclimate.fund/news/moving-planning-action-ndc-partnership-and-green-climate-fund-launch-climate-investment.

growth in methods developed for country-level reporting on climate finance. These have included one off or regular budget tagging of public expenditure relevant to mitigation or adaptation and tracking systems to monitor these expenditures. These efforts have been developed for varying reasons, including monitoring national climate policy plan implementation, identifying financing gaps and linking eligible green expenditures to sovereign green bond issuance, with both ex ante and ex post budget allocation and expenditure tracking applied with the different methods. Spanning developed and developing countries, most domestic green budget tagging systems in developing countries include international climate finance flows, while fewer consider climate and environmentally unfavourable expenditures. Overall, there remains little evidence to identify whether these practices have increased or improved the effectiveness of mitigation or adaptation objectives, however (UNDRR, 2023).

324. The National Climate Funds Tracker identifies national climate funds in 99 developing countries, the first of which was established in 1982 in Nepal.[78] Domestic-level entities established to support accessing, mobilizing and coordinating climate finance can serve both domestic and international climate finance sources. The mandates and scope of national funds vary in order to best serve national priorities and as such cannot be assessed on their effectiveness collectively.

325. The fifth BA noted an emerging interest in establishing country platforms, tailored to developing country needs and priorities, to accelerate nationally driven action on climate change. Country platforms, although not well-defined, is a term used by actors to refer to a government-led partnership to align international and national goals. Experience from development cooperation suggests that successful country platforms need to secure and maintain political agreement (navigating political economy challenges), coordinate public finance from multiple channels and harness private investment (Hadley et al., 2022).

326. In 2021–2022, the shift towards country platforms saw the emergence of JETPs as a novel plurilateral model of accessing climate finance and ensuring country ownership for financing energy transitions in developing countries. The first JETP was announced at COP 26 and was between the host country, South Africa, and an IPG of countries, including the EU, France, Germany, the United States and the United Kingdom, committing USD 8.5 billion in concessional finance to support South Africa's high-level political commitment to accelerate domestic coal-power phase out and an accompanying renewables build-up by 2030. In 2022 and 2023, three additional JETPs were agreed, in Viet Nam (USD 15.8 billion), Indonesia (USD 20 billion) and Senegal (USD 2.5 billion), with an expanded number of countries in the IPG and also including MDBs other DFIs, as well as, in the Viet Nam and Indonesia JETPs, private sector participation coordinated by GFANZ.

327. JETPs entail a clear political commitment for country-led action for an ambitious and accelerated clean energy transition by the host country supported by for financial, technological and implementational assistance from external partners, including concessional sources of finance. Five broad objectives and characteristics are common to the JETP model (Rockefeller Foundation, Environmental Defense Fund, and E3G, 2024; Michael and Martini, 2023):

- Accelerating the clean energy transition of developing countries (focussing on power generation) and contributing to broader sustainable development goals through a green development model;
- Incorporating socio-economic equity and social justice through a just transition of the workforce and local communities;
- Promoting context-specificity and country ownership through tailored country-level approaches, where focus sectors and technologies, governance, financing structures and actors vary by country;
- Setting a near-term focus on implementation in developing investment plans for three to five years.
- Employing a plurilateral model of access and delivery of climate finance in contrast to conventional bilateral or multilateral modes of climate finance (through direct bilateral providers, UNFCCC funds or MDBs), while the limited number of actors seeks to contain coordination problems and accelerate implementation.

328. Early experience in JETP development points to a number of challenges that countries, stakeholders and communities are encountering in realizing the potential of these country platforms (Argueta, 2023; Rockefeller Foundation, Environmental Defense Fund, and E3G,

78) https://www.bu.edu/gdp/national-climate-funds-tracker/.

2024; Suharsono and Maulidia, 2023; FT, 2022; Lenferna, 2023) These relate to inclusive governance processes that incorporate considerations of local communities and workforce in the planning and design stage, limited in-country institutional capacities to conduct pre-feasibility studies and financial modelling, ensuring strong political leadership and coordinating public policy across government ministries and agencies, as well as a lack of clarity on the role of MDBs, on the "new and additional" component of IPG funding and on the role of private FIs in delivering accessible funding. Questions also arise about the large-scale replicability and accessibility of JETPs to other developing countries, given the limited amount of public and concessional resources (Nair, 2024). Lastly, the three investment plans published so far indicate low shares of the financing volumes dedicated towards the 'just' pillars of the action plans; for example USD 12 million and USD 16 million for skills development and for social investment and inclusion respectively of the USD 8.5 billion IPG contribution in South Africa's JETP investment plan[79] (see box 3.1).

329. To date, country platforms for climate action have focussed on the energy sector. The Egyptian Food, Water and Energy Nexus country platform was announced at COP27 with EBRD as the lead financing partner of the Energy pillar committing around USD 1 billion in concessional finance and the United States and Germany announcing contributions of more than USD 250 billion.

Box 3.1

Progress towards Just Energy Transition Programmes

Given their political nature, JETPs require intensive political, institutional and technical preparation processes to translate the commitments into feasible just transition road maps, which include sectoral road maps, investment and financing plans, and the setting-up of inclusive governance processes that ensure stakeholder participation and considerations in project planning and implementation. Given the multi-year preparation stage, no JETP has so far resulted in concrete project implementation. The below, however, provides an overview on the status of JETP implementation:

- **South Africa.** In late 2022, South Africa published its Just Transition Investment Plan for the initial 2023–2027 period, with an assessment of total needs of USD 97.8 billion, of which USD 8.5 billion would come in concession finance from the IPG.[a] The plan acknowledges the comparatively limited amount of concessional finance and thus identified the need to strategically deploy the external public finance primarily for catalytic investments in State-owned electricity and grid infrastructure to mobilize private sector funding for the build-up of renewables and investments in the other two priority sectors of the plan, EVs and green hydrogen. However, the plan also identified that only around 56 per cent of the total needs could be funded by existing sources from the IPG, MDBs and private sector mobilization, while 44 per cent would require additional sources of funding. The Just Transition Investment Plan received Cabinet approval in November 2023 and the National Treasury has announced the first sovereign loan agreements with the World Bank, the German development bank KFW and AfDB for a total of USD 1.8 billion, which can be used for general budget expenditures.
- **Indonesia**. Following the 2022 JETP agreement with the IPG, Indonesia created the JETP secretariat with a subset of technical working groups supported by a range of international development and finance institutions and organizations to develop the Comprehensive Investment and Policy Plan, published for public consultation in November 2023.[b] The Comprehensive Investment and Policy Plan is planned to be a living document and to be updated regularly by incorporating public consultation feedback. With regard to financing volume and ambition, the Indonesia JETP includes a total pledged volume of USD 20 billion, of which USD 10 billion is to come through concessional funding sources from the IPG and associated DFIs or MDBs, and another USD 10 billion is to be mobilized by a set of participating private FIs that are coordinated through GFANZ.
- **Viet Nam.** The Viet Nam JETP was announced in December 2022 and includes IPG countries and private sector participation coordinated by GFANZ for a total mobilization volume of USD 15.8 billion over the next three to five years. Public sector contributions of USD 8.08 billion by IPG countries and ADB and IFC would be matched by a USD 7.75 billion investment by private FIs to support the country for its net zero 2050 goal and 2030 targets (moved forward from 2035) to accelerate and reduce the peaking of its GHG emissions and to transition away from fossil fuels to clean energy. In December 2023, the JETP Resource Mobilization Plan was published, identifying priority investment needs and action areas with a focus on the power sector, namely improving the regulatory framework, transition of coal power generation, developing renewable energy deployment and manufacturing, transmission and distribution and energy

79) See Table 1, available at https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf.

Box 3.1 (cont.)

storage, energy efficiency, energy transition in transport, innovation and technology transfers, and ensuring a just transition, including affordable energy access, training upskilling and job creation.[c] It also presented details on the types of finance and instruments through which IPG funding will be delivered. These are made up of grants in the form of technical assistance and capital grants (USD 321.5 million), concessional finance at below the market rate, including sovereign loans (USD 2.185 billion) and non-sovereign loans (USD 527.7 million), and commercial DFI instruments, including loans (USD 4.229 billion), equity (USD 310 million) and guarantees (USD 240 million). A dedicated JETP secretariat and four working groups have been set up to support progress on the implementation of the mobilization plan.

- **Senegal.** In contrast to the focus on coal-power phase out in the other three JETPs, Senegal's JETP was announced in June 2023 to accelerate the deployment of renewable energies and support the country's increased ambition to reach a 30 per cent share of renewable energies in the domestic electricity mix by 2030, which is to be reflected in Senegal's updated 2025 NDC. The IPG announced mobilization of USD 2.5 billion for an initial period of three to five years towards that aim and the drafting of an investment plan is currently ongoing as the first operational stage towards its implementation.[d]

a. Available at https://pccommissionflo.imgix.net/uploads/images/South-Africas-Just-Energy-Transition-Investment-Plan-JET-IP-2023-2027-FINAL.pdf, receiving Cabinet approval in November 2023.

b. Available at https://jetp-id.org/cipp.

c. Available at https://climate.ec.europa.eu/system/files/2023-12/RMP_Viet%20Nam_Eng_%28Final%20to%20publication%29.pdf

d. https://international-partnerships.ec.europa.eu/document/a35b420d-3422-4a6a-9dc3-6a84e7efb180_en.

3.3.3. Impacts of climate finance: selected insights and experience

330. Impact reporting systems play a critical role in learning from climate finance. Done well, it can provide information on where interventions have succeeded or failed and why. If providers have clear evidence that climate finance is leading to results, they can be more confident in allocating funding, reducing burdens for recipients and improving access. From a recipient perspective increased transparency and learnings about impacts can improve overall programming efforts and selection of interventions that have the greatest climate and co-benefits in a given regional, country or sectoral context. Impact metrics and indicators remain relevant for the implementation of the enhanced transparency framework under the Paris Agreement.

331. Parties agreed at COP24 on modalities, procedures and guidelines for the reporting of finance, capacity and technology transfer, as well as support needed and received,[80] and COP26 finalised CTFs for these areas.[81] In reporting finance received, developing country Parties may report information on the use, impact and estimated results of the financial support received in the common tabular formats, with underlying assumptions, definitions and methods outlined.

332. The multilateral climate funds have in recent years updated and consolidated their impact reporting (see section 1.5 for a detailed discussion). Core indicators are being reported routinely on the portfolio level in annual results or progress reports. However, the main information reported is expected results from the approved project portfolio, while actual results from ongoing or completed projects are not consistently available and thus not systematically reported yet. The reasons for the current lack of comprehensive actual result reporting are, amongst others, long project duration and time lags in the materialization of results over project lifetimes as well as incomplete project documentation or capacity constraints in results reporting at the local level. Figure 3.9 below illustrates a selection of expected and reported results from multilateral climate change funds, the commonalities and divergences in the status of reporting, and the indicators used (see annex D for an elaboration of these results). Due to differences in reporting periods and scope (e.g. reporting for single replenishment and programming periods, or cumulative since fund inception), the results are not set in comparison to figures presented in previous BAs.

- With respect to mitigation, the GCF and GEF report expected GHG reductions of 2,284 Mt CO2 eq and 1,135 Mt CO2 eq respectively for approved and ongoing projects across the portfolios, and the GCF

80) Decision 18/CMA.1

81) Decision 5/CMA.3

reports actual results of 63 Mt CO2 eq achieved (as at December 2022). CTF, SREP and FIP reported a cumulative annual 79.5 Mt CO2 eq, 2.7 Mt CO2 eq, and 100.5 Mt CO2 eq reduction, out of an expected 32.3 Mt CO2 eq, 0.19 Mt CO2 eq and 27.7 Mt CO2 eq annual reduction respectively. In addition, CIF reports growing installed renewable energy capacity and annual energy savings (although measured in different units, which reduces comparability). Mitigation-related multilateral climate funds also report on the number of beneficiaries across all projects or with regard to specific benefits accrued from interventions in the transport, energy and forestry sector. The GCF reports a cumulative number of 57 million direct and indirect beneficiaries reached, while expected results for the portfolio of projects is 666 million direct and indirect beneficiaries. The GEF reports an expected 2.1 million direct beneficiaries from GEF climate mitigation support projects, of whom 1.0 million are women. The CTF reports on 0.3 million passengers per day using low-carbon public transport out of an expected 1.8 million, while FIP reports on 1.1 million out of an expected 1.4 million people with livelihood benefits and SREP notes 1.8 million people with improved access to electricity from an expected 6.4 million;

- A key result indicator reported for the adaptation theme by all multilateral climate funds with a dedicated adaptation focus (AF, LDCF, SCCF, PPCR) is the number of beneficiaries (direct and/or indirect). The AF reports an expected 35.92 million beneficiaries with reduced vulnerability to climate change and increased adaptive capacity (of which 10.65 million are direct and 25.2 are indirect beneficiaries) based on 132 approved projects. The LDCF and SCCF under the GEF report a combined expected 732,937 beneficiaries of whom 365,611 are women, and PPCR reports actual direct beneficiaries reached of 3.2 million, of the portfolio's 5.3 million expected direct beneficiaries;
- Hectares of land protected or under sustainable management is widely reported across funds for adaptation and mitigation interventions. These have a cumulative expected total of 372.8 million ha and an actual area covered through existing projects of 41.4 million ha including FIP, PPCR, LDCF and SCCF. The GEF reports a further expected 128 million ha of land managed, protected or restored from its GEF-8 portfolio of projects (across three relevant core indicators). AF interventions are further expected to protect 162.3 km of coastline and to introduce 516 early warning systems while results from the PPCR portfolio have led to 2,905 km of climate-improved roads constructed or rehabilitated.

Figure 3.9

Selection of actual and expected results of multilateral climate funds

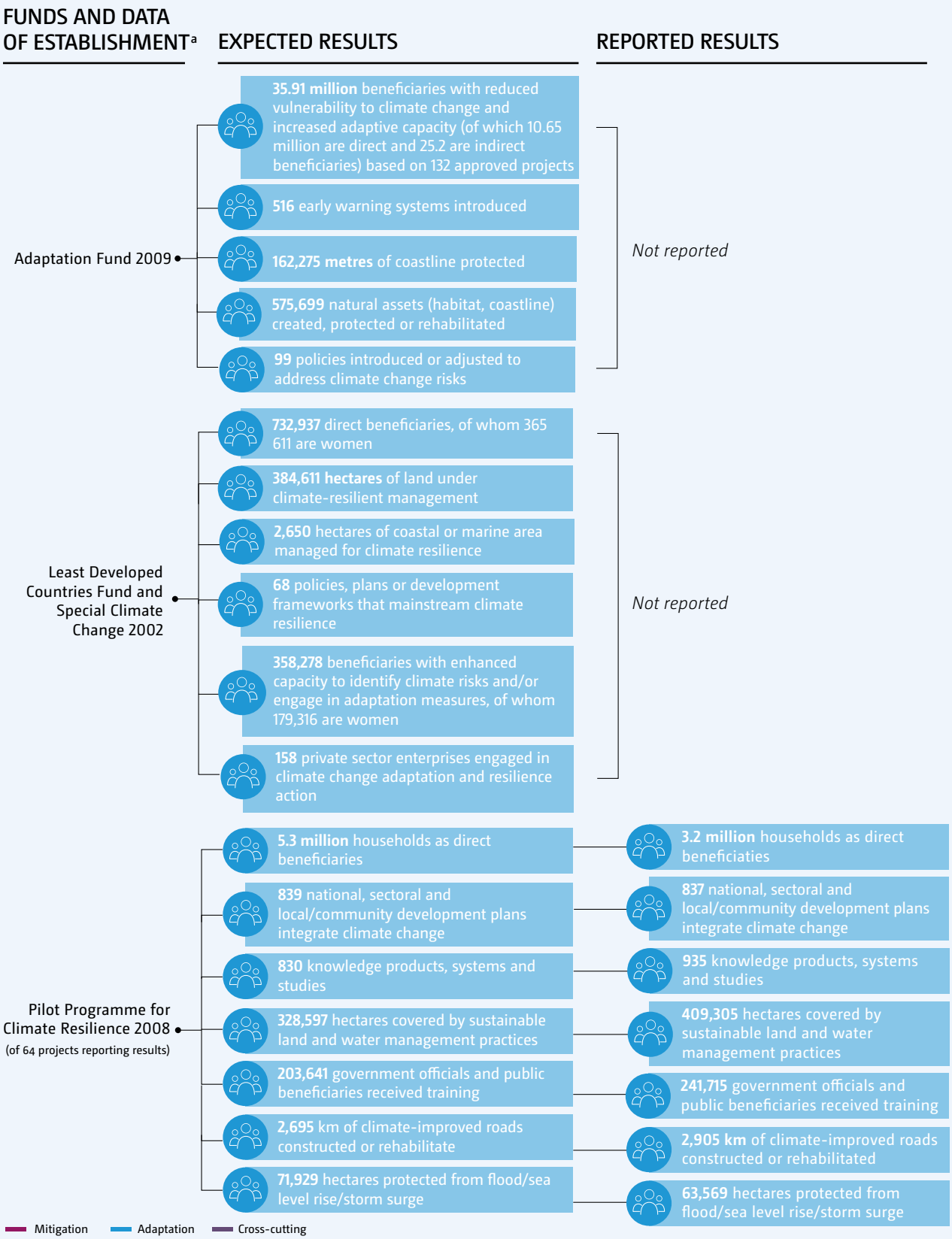
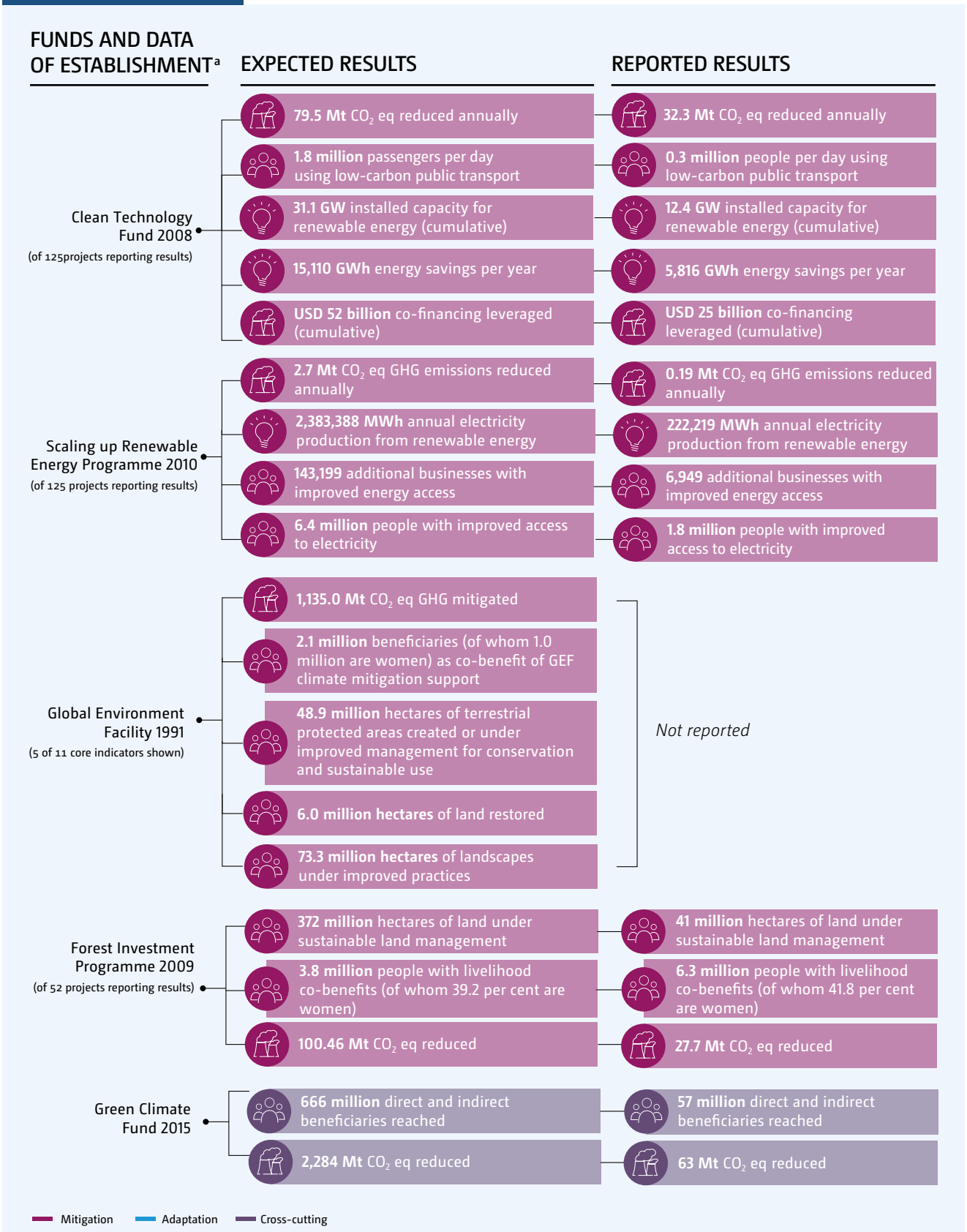


Figure 3.9 (continued)



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 D)

333. MDBs and IDFC do not currently include information on mitigation and adaptation outcomes in their joint reporting on climate finance. While most MDBs do report in their annual reports or through dedicated scorecards or development and sustainability reports on expected and/or actual results at the portfolio-level of their entire operations these are not presented separately or linked to climate-specific interventions. It is not possible to set the volume of climate finance reported by MDBs and DFIs in direct connection to the climate impact achieved, although reported results provide qualitative indications. Table 3.4 presents a selection of climate-relevant impact indicators reported by MDBs at the portfolio level for approved projects in 2022, focussing on GHG reductions reported and other impact indicators reported that were considered adaptation-relevant.

Table 3.4

A selection of climate-relevant impact indicators reported by multilateral development banks at the portfolio level

MDB	Annual expected GHG emis-sion reductions (Mt CO2 eq)	Number of beneficiaries or other adaptation-related indicators
ADB (actual results of completed operations/ financing)	29.6 million	4.3 million people benefiting from strengthened environmental sustainability 0.270 million people with strengthened climate and disaster resilience
AfDB[a] (three-year moving average over 2020-2022)[a]	2.6 million	2.9 million people benefited from agricultural improvements (of whom 1.4 are million women) 11,100 ha of land with improved water management
AIIB	19.2 million (cumulative over portfolio)	8.71 million people with improved access to safely managed drinking water supply services. 7.42 million people with improved access to safely managed sanitation services.
EBRD	11.1 million	NA
EIB	4.6 million[b] (cumulative over portfolio)	11.2 million people with reduced exposure to drought 0.235 million people with reduced risk of flooding
IDBG	2.954 million	0.487 million beneficiaries of enhanced disaster and climate change resilience
IsDB	Not available	63,222 households with safe drinking water 60,000 households with improved sanitation and sewage systems
NDB	Not available	Not available
World Bank Group (cumulative over portfolio)	194 million	98 countries supported towards institutionalizing disaster risk reduction

Source: based on authors' review of MDBs' annual result and sustainability reports and corporate scorecards. The reported results are not linked to climate- or sustainability-related finance provided. The indicators presented are a selection of available result indicators as reported by MDBs considered climate-relevant in the authors' judgement.

a. Results are prorated by proportion of total financing

b. Relative emissions (Mt CO2eq/year).

334. Bilateral DFIs and development agencies follow similar impact reporting and measurement practices as MDBs, whereby climate-related result metrics feature regularly in MRV frameworks at the project level, and some climate-related KPIs are reported at the portfolio level, although not tied specifically to, or reported separately for, climate finance interventions. A review of bilateral DFIs' portfolio reporting suggests that aggregate impacts are at a similar order of magnitude as MDBs or multilateral climate funds. In the area of mitigation, for example, the AFD, Norfund and OeEB report GHG emissions avoided or reduced through projects financed in 2022 of 10 million, 6.2 million and 3.8 million tCO2eq respectively. In the area of adaptation, some examples include the United Kingdom International Climate Finance reporting 95 million people supported to better adapt to the effects of climate change during 2011-2022, Finfund reporting 5.6 million people fed or small-holder farmers reached in 2021 and SECO reporting 6 million beneficiaries involved in sustainable urban planning. In the context of climate-change related disclosure frameworks for FIs, some bilateral DFIs have, in addition, also commenced disclosing information on the carbon intensity of their financing operations. Swedfund, Cofides and IFU reported GHG emissions per invested million of their respective currency (Swedish kronor, euros and Danish kroner) of 28.4, 333, and 129 for 2022 or 2021.

Mobilizing additional climate finance flows

335. 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 channels and institutions of climate finance, however. A key challenge is definitional, with co-financing leveraging and private sector leveraging both distinctly different but often conflated (De Nevers, 2017). Differences in the use of terms and methods applied complicate comparability between institutions, with differences found in the scope of the application of the method (such as the instruments included and underlying formulas), and in the differentiation of direct and indirect mobilization (see chapter 1.3.2 above).

336. Current methods to understand the mobilization of climate finance remain narrow. Approaches are unable to capture the mobilization effect of capacity-building, budgetary support or domestic policies, for example. While there have been long-standing concerns that high ratios of both co-financing and leverage may suggest that highly concessional public finance was not required in certain sectors, such as energy, where commercial business models and profitability have matured (Stadelmann, Michaelowa, and Roberts, 2013; Brown et al., 2011), concessional finance continues to constitute a key financing element in other themes and sectors. 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.

337. With respect to the major multilateral climate change funds, neither the AF nor the GCF have co-financing requirements. The GEF instead has a 1:7 target, while its current co-finance ratio is at 1:8.5 if only the mitigation co-finance ratio is considered. CIF's overall co-financing (of public and private sources) ratio remains the highest of the multilateral climate change funds at 1:8.6 (the private sector co-financing ratio is 1:2.6). The overall fund data obscures differences between the sub-funds of the CIF, with the highest co-financing ratios found in the CTF which predominantly finances infrastructure (1:11 in 2022), and 1:5.6 for the SREP, while CIF funds oriented towards forests (FIP) and resilience (PPCR) have ratios of less than 1:2.5. The GCF ratio remains at 1:2.8 for the total portfolio between 2015 and 2022 and at 1:2.9 for the GCF-1 (2020—2022) period. With no harmonized methodologies for estimating private climate finance from the funds, these results are not necessarily directly comparable.

338. Efforts to enhance private sector mobilization are also visible in recent bilateral result management frameworks, where some DFIs have introduced KPIs or core indicators to track progress. For example the IKI reports USD 245.5 million and USD 548.5 private capital leveraged and catalysed respectively for the 2015—2022 portfolio of projects, and the UK International Climate Finance reports USD 5.2 trillion private finance mobilized for climate change purposes from 2011 to 2022.

339. MDBs report annually on climate co-financing of public and private external parties alongside MDB climate finance. Total private co-financing figures are presented by private direct mobilization and private indirect mobilization. Private direct mobilization refers to financing from a private entity on commercial terms owing to the involvement of the MDB, while indirect refers to that where the MDB plays no active or direct role that leads to the commitment of the private entity's

finance. In 2022, MDBs reported USD 30 billion and USD 15.4 billion of private finance for high-income economies and low- and middle-income economies, respectively.[82]

Gender and climate finance

340. The Cancun Agreements reached in 2010 acknowledged that gender equality and the effective participation of women are critical in climate change action. 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 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, Parties adopted the enhanced Lima work programme on gender and its gender action plan, to run for five years. It not only aims for gender-appropriate governance in the UNFCCC process itself but also 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. While gender action plan implementation was reviewed in 2022 at COP 27, COP 28 initiated the final review of the Lima work programme on gender and its gender action plan, to be concluded at COP 29

341. Climate investments that have applied a gender lens have greater efficiency, effectiveness and impact (Espinoza, 2021; Cook, Grillos, and Andersson, 2019). This echoes evidence that suggests that gender-responsive public finance is both more effective and efficient (Habtezion, 2017; World Bank, 2012). Gender-responsive public finance, for example, is able to take into account the gender dynamics of food production, procurement and distribution, or the different needs of men and women for access to clean energy or as users of mass urban transport in terms of affordability, trip length, frequency and security (CIF, 2014). Gender-responsiveness also has a human rights and climate justice dimension: including through the socio-economic empowerment and equal participation of vulnerable groups (such as in education, capacity-building and land rights).

342. The BA has long outlined the progress of integrating gender considerations in multilateral climate change fund governance and operations, particularly those of the Financial Mechanism (see figure 3.10). While many funds started out gender-blind, the quality of entry (required gender assessments and integrated gender action for funding proposal design and approval) has improved. However, accountability for the quality of gender-related outcomes (the monitoring of gender differentiated benefits and related data aggregation at fund level, and the capacity and track record of implementing entities) has lagged behind the progress made in governance and operations (Schalatek, 2024). The GEF has increased the number of projects reporting against sex-disaggregated or gender-responsive indicators, although there remains a deficit in human and financial resources to implement gender policy mandates (GEF IEO, 2022). The AF strengthened the need for gender equity as a cross-cutting issue in its 2023—2027 medium-term strategy and has started a pilot gender scorecard to assess gender integration at both project entry and exit. As part of its updated strategic vision, the GCF in 2024 will follow up on its 2019–2023 gender action plan amid an organizational restructuring.

343. Climate finance integrates gender considerations to a greater extent than other development financing according to gender-marked data from OECD, with adaptation and cross-cutting finance more likely to be gender-marked than mitigation finance, implying that it targets gender equality as a policy objective (Cichoka, Hughes, and Mitchell, 2024). Gender mainstreaming efforts and policies are in place for most bilateral climate finance providers and development agencies. Many large bilateral providers have integrated gender perspectives into results management frameworks and a set of major DFIs are members of the 2X Challenge, a movement seeking to assess and structure investments with a strong gender-lens.

344. The multilateral climate change funds have also influenced how DFIs address gender in climate finance. EBRD, for example, has integrated gender into the entire spectrum of climate investments inspired by the gender policy of the GCF, while CIF approach has been a useful model climate–gender framework for ADB's investments (Attridge, 2021). In the MDBs, only the World Bank make available both climate and gender tagging in their project database to readily assess gender-related climate finance.

345. Most gender-related interventions to date are dedicated to enhancing the participation and

82) https://www.eib.org/attachments/lucalli/20230128_mdbs_joint_report_2022_en.pdf

empowerment of women in local agricultural and other economic value chains, securing income and development for resilience-building, or enhancing access to clean energy and other public services. Further improvements have been called for, including moving gender-responsive finance from a mainstreaming approach into an active investment strategy, counting the number of beneficiaries, a greater focus on transformative change and responding to the underlying structural causes of gender inequality in societies or specific economic sectors (ACT, 2023). There remain concerns about climate finance access for women, in particular for (concessional) loans, given the lower rates of financial and economic inclusion of women globally, and consequently the lower amounts of assets available, which are required as collateral for loan-based financing arrangements (Achampong, 2023).

346. As noted in the first NDR, gender considerations were a blind spot in the articulation of developing country needs. Less than 10 per cent of needed activities referred to gender and where these topics were in included in national reports, information tended towards commitments, policies and/or strategies. The second NDR highlights progress made by developing country Parties in reporting the gender-responsiveness of their climate action plans in national reports. 81 per cent of developing country Parties have provided gender-related information in their NDCs, with 34 per cent affirming that they will consider gender in implementation. Additionally, more Parties are adopting methods to integrate gender-responsiveness into the identification and prioritization of national adaptation plans and adaptation actions. The second NDR noted the critical role of community-based vulnerability assessments and stakeholder consultations in identifying local gendered risks and adaptation needs in both NDC and NAPs (SCF, 2024b).

Figure 3.10

Gender policy development in major multilateral climate change funds

Source: Schalatek (2024)

The role of international climate finance from developed to developing countries towards a just transition to a pathway towards low greenhouse gas emission and climate-resilient development

347. In its preamble, Parties to the 2015 Paris Agreement are "Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities" (UNFCCC, 2015). At COP 24, the Silesia Declaration on Solidarity and Just Transition created a link between a just transition and the achievement of the SDGs, reaffirming the need for equitable access to sustainable development and the eradication of poverty. While there is no universal definition of a just transition, not least because it will be place-specific, it was conceptualized as decent work for all, social inclusion and the eradication of poverty (ILO, 2015).

348. At CMA 4 „ Parties decided to establish a just transition work programme to discuss pathways to achieving the goals of the Paris Agreement, outlined in Article 2, paragraph 1, in the context of Article 2, paragraph 2. Following deliberation by Parties deliberations on the scope of the work programme during 2023, Parties at CMA 5 decided on its implementation starting in 2024, and underscored the importance of an urgent delivery of the means of implementation (capacity-building, climate finance, and technology development and transfer) to facilitate just transition pathways and to enhance international cooperation on, and support for, just transition pathways, especially for developing country Parties.[83] Elements to be covered by the work programme include among others, just and equitable transition, which encompasses pathways that include energy, socioeconomic, workforce and other dimensions, all of which must be based on nationally defined development priorities and include social protection so as to mitigate potential impacts associated with the transition; opportunities, challenges and barriers relating to sustainable development and poverty eradication as part of transitions globally to low emissions and climate resilience, taking into account nationally defined development priorities; and approaches to enhancing adaptation and climate resilience at the national and international level.

349. In 2023, the SCF Forum focussed on financing just transitions. It illustrated that while the early focus of just transitions was on the energy sector, just transitions are to be considered in many sectors, which will necessitate a shift from 'business as usual', including in transport, agriculture, tourism, water, forestry, mining and land use. The Forum also called for transitions to be just for all stakeholders, including all affected workforces and communities. The Forum emphasized country-specific transition pathways, which require multi-stakeholder and partnership approaches, including a range of government ministries and agencies, subnational and local governments, international and local financing institutions, corporations, the workforce and local communities, including marginalized groups. A number of conventional and innovative financial instruments and mechanisms were presented at the Forum that can meet diverse financing needs, including blending public and private finance sources with multilateral climate funds, MDBs and bilateral FIs identified as partners in supporting the financing of just transitions (SCF, 2023d).

350. As at 2024, none of the dedicated multilateral climate change funds under the Convention have a dedicated just transition financing strategy. CIF has launched the ACT investment programme to advance a just transition from coal to clean power in six pilot countries, including the two JETP countries South Africa and Indonesia (see paragraph 323 above). The programme includes formulating guidance for just transition investment plans and is seeking to develop a just transition monitoring framework (CIF, 2023b). The GCF Strategic Plan for 2024—2027 entails strategic priorities with relevance for just transition, including readiness and preparatory support, enabling environments for transitions and supporting paradigm shifts for mitigation sectors including energy and transport and enhancing resilience. It also participates in diverse financing models such as multi-country and stakeholder platforms, utility- and small-scale projects, and incorporates environmental and social safeguards that may be considered in line with inclusive, people- and impact-centred just transition approaches.

351. The MDBs have committed to work towards financing and policy strategies to support just transition (AfDB et al., 2019; CIF and SCF Trust Fund, 2021). EBRD has been particularly active in launching its just transition initiative in 2020 and developing a Just Transition Diagnostics and Action Plans product to assess the impacts of accelerated decarbonization scenarios for carbon-intensive regions and jobs.[84] Furthermore, MDBs such as ADB, IFC and EBRD increasingly engage in JETP

83) Decision 3/CMA.5.
84) Available at https://www.ebrd.com/what-we-do/just-transition-initiative

or similar country platforms (see paragraphs 323. above).

3.3.4. Consideration of the drivers of climate finance flows

352. 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.

353. Globally, across mitigation solutions, policy targets and support mechanisms have played a major role in driving climate finance flows. For renewable energy, 170 countries have national targets for power generation from renewables as at 2023, up from 165 in 2021, and 90 countries have set economy-wide renewables targets (REN21, 2024). In total, 182 countries have set at least one renewable energy target, either economy-wide or in specific sectors, such as power, heating and cooling, transport or biofuels. In addition, net zero policies have been announced or set into law in 151 countries globally (REN21, 2024). As falling technology costs have driven finance flows on the supply side in recent years (as noted in chapter 2.2 above), such demand-side incentives are complemented by market-based auctions. In 2022, a record 100 GW of renewable energy capacity was auctioned globally (IEA, 2023c). However, a challenging macroeconomic environment, including inflationary pressures, rising financing costs for project developers and supply-chain constraints for manufacturers, led to around 20 GW of unallocated capacity.

354. With regard to other economic sectors, favourable policy environments and support mechanisms have been introduced in the EV and heating sectors (both for industrial applications and households, and including in buildings) in recent years, in particular in large economic markets, leading to enhanced investment certainty in these green technologies and are reflected in rising financial allocations (see chapter 2.2 above) (IEA, 2024c). As in previous BAs, the absence of strong global climate policies in the AFOLU sector continues to pose a barrier to large-scale public and private mitigation investments in these areas (FABLE, 2022). The AR6 identified that policy measures exist in all world regions, albeit with differences in stringency and mitigation potentials, and that considerable barriers exist to scaling up AFOLU-related investments, including, among others, lack of access to alternative sources of income in rural households, lack of economic incentives for more sustainable production and consumption patterns, dependencies for the monetization of mitigation approaches in these sectors, financial risks related to the uptake of new technologies and longer time horizons for the amortization of investments (IPCC, 2022b).

355. For adaptation, a lack of data on finance flows (see chapter 2.2 above) and a relative lack of solutions that generate cash flow, limits the role of private finance and the understanding of existing drivers of climate finance flows (UNEP, 2023b). Increasing awareness about the physical risks of climate change is leading to the mainstreaming of climate risk and vulnerability assessments as standard components of public and private investments, suggesting increased spending in climate-resilient 'hard-type' infrastructure over time. Models to finance 'soft-types' of adaptation solutions including nature-based solutions, are being sought, in particular in the context of the Kunming–Montreal Global Biodiversity Framework's 2030 targets to restore 30 per cent of degraded ecosystems and halt biodiversity loss. Barriers to investment exist in the area of soft adaptation solutions including with regard to the establishment of cash-flow generating business models and the location and context specific nature of adaptation investments which pose challenges for the replicability and scalability of commercial projects and financing models (CPI, 2023a). As a result, current adaptation finance flows are driven to a large extent through domestic public expenditure policies and priorities, such as earmarking tax revenues to be spent on adaptation, or green and sustainability-linked bonds. Countries' strategic adaptation and resilience planning remains a critical component for increasing adaptation flows, and planning continues to increase over time. Fifty-two developing countries have submitted NAPs as at the end of 2023, while a total of 142 developing countries reported being in the process of formulating or implementing NAPs.[85]

356. Emerging financial instruments and mechanisms that help direct private finance flows towards climate change adaptation have been identified (IPCC WGII, 2022). These are the issuance of adaptation-specific green, social impact and resilience bonds, dedicated investment vehicles such as equity funds, to invest in resilience-enhancing and risk reducing business models, balance sheet financing and a variety of insurance products (as noted in chapter 3.2.1 above). International initiatives such as the Early Warnings for All initiative

85) See NAP Progress Publication 2023, available at https://unfccc.int/documents/635394 and https://unfccc.int/news/record-number-of-national-adaptation-plans-submitted-in-2023-but-more-are-needed

that bring together public and private, international and domestic actors and leverage pooled and concessional funding mechanisms further support increased investments in resilience and adaptation solutions. In the private sector, increasing awareness of and disclosure and supervisory regulations on physical climate risks are leading to the consideration of dedicated adaptation financing targets or transition planning as a potential supply-side driver, albeit such approaches are at an earlier stage compared with emission reduction and mitigation financing targets by FIs and corporates (see chapter 1.6 above and chapter 4 below). Government or industry body led efforts for establishing adaptation finance taxonomies may also enhance the investment case for resilience activities over time, although the financing and real-world impact of taxonomies has not been comprehensively assessed yet, and most taxonomies so far have adopted a process-based approach to adaptation activities rather than outlining eligible activities (see chapter 1.3 above).

357. 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 from contributor countries. In addition, target-setting on climate finance commitments by MDBs, DFIs and governments, in particular adaptation financing targets, has driven a significant upscale in climate finance flows. Most MDBs had already fully or partially surpassed by 2022 their internally set climate finance targets up to 2025 (see table 3.5 below) and reported climate finance commitments of USD 60.7 billion to low- and middle-income countries in 2022, significantly higher than the USD 50 billion expectation formulated in 2019 (AfDB et al., 2023). Recent developments on the reform of MDBs including the recommendations of the G20 Capital Adequacy Framework review have also seen announcements by the MDB collective in 2024 to seek to increase annual lending capacities towards sustainable development projects by USD 300–400 billion over the next decade. Bilaterally, many governments and DFIs have made commitments on dedicated adaptation financing targets, including in the context of responding to the Glasgow Climate Pact's urge to doubling adaptation finance to developing countries from 2019 levels by 2025.

358. The fifth BA highlighted heightened security and safety concerns, such as those that exist in fragile and conflict-affected contexts, as an emerging factor in access to climate finance. It reported that fragile States received less climate finance, despite their high climate vulnerability, as a result of, for example, provider risk aversion, increased project implementation costs, low availability of local implementing partners and human capital, and capacity flight (Alcayna and Cao, 2023; Sitati et al., 2021; UNDP, 2021). Solutions are being proposed, however, including increasing the understanding and tolerance of risk by providers, retaining operational flexibility in fast-changing situations, and centring and strengthening community focus.

359. While private sector climate finance thrives on the sector-specific support mechanisms identified above, cross-cutting features of enabling environments including country-level good governance and institutional capacities have also proven to be significant drivers. These have been identified, amongst others, as stability of exchange rates, absence of conflict, 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). In the context of discussions on the evolution of MDBs and the international financial architecture solutions are increasingly being explored that enhance the coordination and interaction of public and private financial actors in increasing foreign exchange hedging and currency pools, domestic currency financing and local financial market development, and for improving debt sustainability in developing countries, in order to enhance financial market access and investment profiles. Furthermore, the impact of institutional and governance reforms conducive for country business environments and trade openness on private sector financing and FDI is well established in the literature (Banday, Murugan, and Maryam, 2021; Pienknagura, 2024).

3.4. Climate finance in context

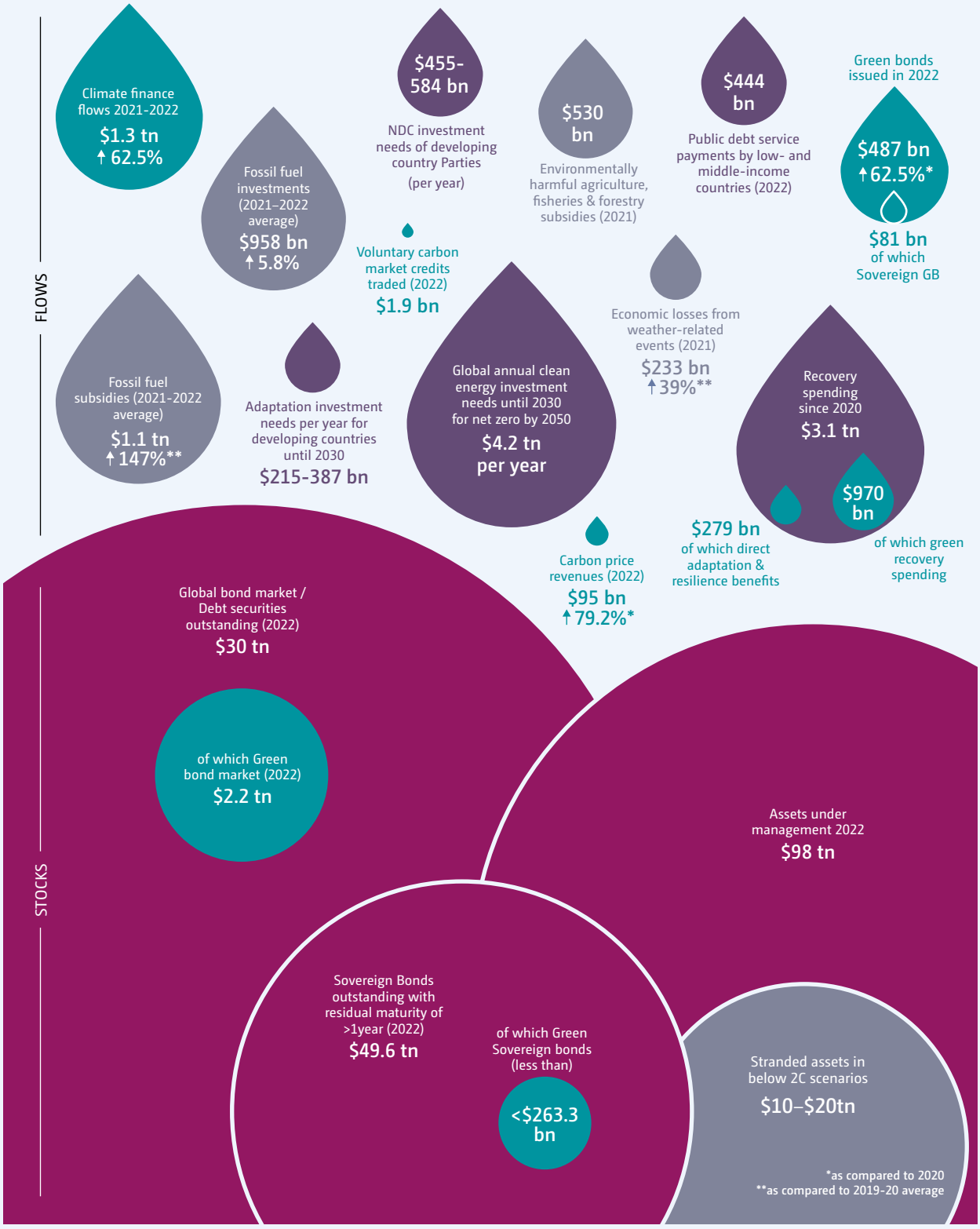
360. Given the scale and speed needed for the transformation to low-emission, climate-resilient development pathways, it is critical to consider climate finance flows within the context of broader finance flows. A sole focus on positive climate finance flows will be insufficient to meet the overarching 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 stocks 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 underscore the importance of integrating 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.

361. While the first portion of this chapter has been focussed on international finance flows from developed to developing countries, this section focuses on global climate finance flows more broadly, including flows from developed to developing countries, and places these in the context of total finance flows, finance flows to potentially climate mis-aligned actions, needs and risks. It is acknowledged that embedding considerations of 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.

Figure 3.11

Global climate finance in context: broader flows, opportunities and costs



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

362. Chapter 2 above estimates a 94 per cent growth in global climate finance flows in 2021–2022 as compared to 2019-2022, to USD 1.3 trillion per year. Although total global climate finance flows are increasing, they remain relatively small when viewed in the context of total finance flows. Despite feasible, effective and low-cost mitigation options being available in all sectors to keep 1.5 °C within reach in this critical decade, these global climate finance flows remain well below the available estimates of the required investments to keep 1.5 °C in reach, the articulated developing country needs to achieve the goals of the Paris Agreement. Furthermore, the effectiveness of global climate finance towards a transition to low-emission, climate-resilient futures remains uncertain in the context of broader finance flows and investments (see figure 3.11)

363. Against a backdrop of a global energy crisis and difficult macroeconomic circumstances, including rising interest rates, the global total energy investment was estimated at USD 2.6 trillion in 2022 and is anticipated to reach USD 2.8 in 2023, an increase on USD 2.3 trillion in 2021. Of this total, the global clean energy investment has grown rapidly and is predicted to reach USD 1.7 trillion in 2023, while, for comparison, fossil fuel investment remains above USD 1 trillion (IEA, 2023d) and even with growing demand assumptions, down-, mid- and upstream fossil fuel investment are estimated to be sufficient at above USD 500 billion annually through to 2045(OPEC, 2023). In 2021–2022, fossil fuel investments (without carbon capture and utilization or storage) in the power sector amounted to USD 958 billion annually on average, while the oil and gas upstream sector accounted for an additional USD 400–500 billion (IEA, 2023e). While the increase of the clean energy to fossil fuel investment ratio to around 1.7:1 reflects increasing demand for clean energy, this spending remains distributed unevenly globally, with a concentration of spending in a small number of large high-income and emerging economies, while investments in other world regions progress slowly. IEA reports that since 2021, more than 90 per cent of the increase in clean energy spending was located in advanced economies and China. Where high a dependence on fossil fuels exists for national revenue and employment generation, for example, policies that promote economic and energy sector diversification and considerations of just transitions principles, processes and practices are required in the pursuit of sustainable development (IPCC, 2022).

364. Estimated total climate finance flows remain well below the estimated needs of low-emission, climate resilient development transitions. While costed needs estimates use varying methods and assumptions, they remain useful to illustrate the order of magnitude of needs and forecasts of the trajectory of such needs (Tan and Pettinotti, 2024). Annual global energy sector investments to reach net zero until 2050 are estimated at USD 4.7 trillion per year (IEA, 2023d), of which USD 4.3 trillion would be in clean energy and the remaining USD 0.4 billion in fossil fuel supply, noting that fossil fuels remain part of net zero scenarios.[86] Global climate finance in 2021–2022 amounted to 30 per cent of the annual clean energy investment needs until 2030 to maintain a 1.5 degree pathway according to the IEA Net Zero Scenario (USD 4.3 trillion), or 54 per cent of the annual total investment needs of developing countries for climate action including adaptation, resilience and natural capital investments according to the Independent High-Level Expert Group on Climate Finance (USD 2.4 trillion) (IEA, 2023e; Bhattacharya et al., 2022).[87] The second Needs Determination Report of the SCF provides updated information on the financing needs of developing countries as stated in their NDCs, which total USD 4.7–6.5 trillion. According to the contribution of Working Group II to the AR6, adaptation investment needs for developing countries alone are estimated at a median of USD 127 billion per year up to 2030 and USD 295 billion per year up to 2050 (IPCC, 2022). The recent UNEP Adaptation Gap Report (2023) estimates a central range of adaptation finance needs of developing countries at USD 215—387 billion annually up to 2030.

365. Ongoing failure to meet global climate stabilization targets will also lead to higher costs with respect to the adverse effects of climate change. While not all weather-related events (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. In 2022, insurance claims from natural catastrophes reached USD 125 billion, with a total of USD 275 billion in economic losses. Of this, insurance claims from weather-related events comprise around USD 120 billion, and similar levels were recorded in 2021 (USD 119 billion) (Swiss Re Institute, 2023). Considering variation in the geographic distribution of insurance penetration, it is difficult to compare the extent to which

86) IEA. 2023b. World Energy Outlook. Available at https://iea.blob.core.windows.net/assets/42b23c45-78bc-4482-b0f9-eb826ae2da3d/WorldEnergyOutlook2023.pdf
87) Noting that these reports differ in scope regarding geographies and financial sources.

developing and industrialized countries were able to rely on insurance to recoup losses, while data availability challenges suggest that additional economic losses are unreported. Losses to cultural heritage and to biodiversity integrity as a result of a changing climate are also unreported (Colenbrander et al., 2022). The estimated total damages and economic losses after the intense floods in Pakistan in 2022 were articulated in a post-disaster needs assessment at over USD 30 billion, with additional reconstruction needs estimated at more than USD 16 billion.[88]

366. While the investment estimates are high, the IPCC places global yearly average low-carbon investment needs until 2030 for electricity, transport, AFOLU and energy efficiency measures, including industry and buildings, at between 3 and 6 per cent of the world's GDP. The costs are not distributed evenly, however, with the estimated mitigation financing needs at around 2–4 per cent for developed countries and 4–9 per cent for developing countries, relative to their average 2017–2020 GDP (Kreibiehl et al., 2022).

3.4.2. Climate finance in the context of domestic finance

367. The fifth BA reported that in the wake of the COVID-19 pandemic, many developing countries faced the twin challenges of increased spending needs and heightened debt distress. Following disruptions in the energy and food markets, the global economy is recovering slowly, but this growth remains uneven and many emerging markets and developing economies are not yet on track to a full pre-pandemic recovery. Continued levels of elevated debt, rising funding costs, slowing growth and a mismatch between the demands on the State and fiscal sources are noted by (IMF, 2023a).

368. The issuance of sovereign and sub sovereign green bonds is a way to raise funds for environmentally sustainable public investments when the creditworthiness of State actors is at or above investment grade. Given a difficult market environment and rising interest rates, the green bond market saw its first ever year-on-year decrease in 2022 (USD 487 billion of new issuances, compared with USD 582 billion in 2021). New sovereign green bond issuances were USD 81 billion in 2022, and the cumulative size of the sovereign green bond market totals USD 263 billion from 28 different issuers, of which 12 are non-Annex I countries. The overwhelming majority of the market volume, however, stems from Annex I countries, particularly in Europe (CBI, 2023a). As at the end of 2023, total green bond issuances rebounded to USD 588 billion within the year, and new aligned sovereign green bond issuances increased to USD 120 billion in 2023 (CBI, 2024).

369. Fiscal policy (referring to levers that raise public revenues and direct public resources, such as through budget expenditure) government subsidies have long been a focus of discussions on fiscal policy for climate action. Set at the national level, and existing at both the national and subnational level, subsidies often have multiple objectives, including the protection of poor and vulnerable households, and ensuring energy access. But it remains important to understand how fiscal policy interacts with national climate objectives and the potential to reorganize public subsidies that facilitate higher GHG emissions, such as fossil fuel subsidies and some land-use subsidies, and to explore how fiscal policy can increase resilience to climate change impacts.

370. In the context of a global energy crisis and to shield consumers from large price spikes and inflationary pressures, fossil fuel consumption subsidies by governments increased to the highest levels recorded in history. The fossil fuel subsidy tracker estimated fossil fuel subsidies and other support measures for 192 economies at USD 1.529 trillion in 2022, more than double the estimated volume in 2021 (USD 738 billion). In addition, subsidies with environmentally harmful effects in the agriculture, fisheries and forestry sector are estimated at around USD 530 billion globally in 2021 (UNEP, 2023b).

371. Reform of fiscal policy, where consistent with national circumstances and laws, has the potential to improve public revenue, macroeconomic and sustainability performance. Fiscal policy to incentivize low-emission development pathways can also raise government revenues, such as through carbon pricing, carbon taxes or emissions trading, although are rarely sufficient on their own (IPCC AR6). It must also be acknowledged that adjustment to fiscal support shifts traditional business and production models and support should be offered to those affected by climate policies so that the transition to low-emission, climate-resilient pathways is just (see for example (Steadman et al., 2024). The IPCC is clear that fossil fuel subsidy removal can have adverse distributional impacts, especially on the most

88) See The Government of Pakistan, Asian Development Bank, European Union, United Nations Development Programme, World Bank. 2022. Pakistan Floods 2022. Post Disaster Needs Assessment Main Report. October 2022. Available at https://thedocs.worldbank.org/en/doc/4a0114eb7d1cecbbbf2f65c5ce0789db-0310012022/original/Pakistan-Floods-2022-PDNA-Main-Report.pdf

economically vulnerable groups which, in some cases can be mitigated by measures such as redistributing revenue saved, all of which depend on national circumstances (IPCC, 2023a) Targeted international support may also be required to reduce adverse socio-economic impacts of decarbonization policy shifts in highly fossil fuel dependent developing countries (Jensen, 2023).

372. The 2015 SCF Forum highlighted the relative scale of subsidies, taxes and fiscal incentives in forestry and agricultural production which generate the underlying incentives that drive land-use activities.[89] These fiscal policies are largely aimed at guaranteeing minimum income for producers or affordability of food. Data remain limited on the effect that agricultural and land-use subsidies exert on GHG emissions (or climate change vulnerability). It is recognized, however, that agricultural support (estimated at about USD 850 billion a year during 2020-2022) can be reformed to better climate-align land use and agricultural practice incentives in both rich and poor countries (OECD, 2023a; UNEP and ELD, 2022; Watson, 2021).

373. As outlined in fifth BA, fiscal policy can also support adaptation actions through their subsidies and through direct spending including in water and sanitation, for infrastructure and in disaster risk management, particularly where it relates to fiscal resilience for planning and budgetary cycles.

374. A major component of fiscal policy and public budgets is public procurement, through which governments purchase goods, services and other works from non-governmental actors. Public procurement was estimated to amount to USD 13 trillion per year in 2019 and to represent 15 per cent of GDP globally (Fagan et al., 2022). In the context of the recent economic and COVID-19 related stimulus packages worldwide, the weight of public procurement is likely to have increased since. Owing to its magnitude, public procurement also has considerable environmental impacts, being responsible for an estimated 15 per cent of total GHG emissions (WEF, 2022), mainly concentrated in the sectors of defence, transport, energy, industry, construction and waste management. Green public procurement is therefore considered an important lever through which governments can reduce their climate and environmental impact and incentivize a broad range of sectors and companies to adopt more sustainable, resilient and less emissions-intensive business practices.

The concept of green public procurement is referenced in the Government Procurement Agreement of the WTO and also features as one of the commitments within the Coalition of Finance Ministers for Climate Action (see chapter 4.4.2 below).

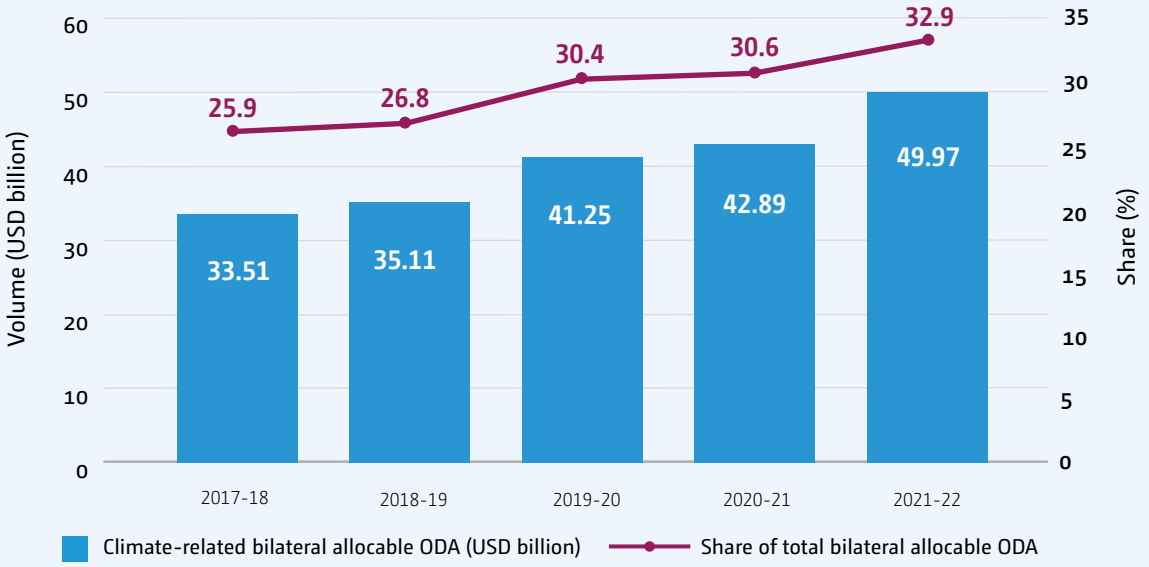
3.4.3. Climate finance in the context of domestic finance

375. Total ODA reached around USD 220 billion in 2022, a 19 per cent increase compared with 2021 and a 27 per cent increase compared with 2020. The clear interlinkage of climate action and sustainable development is increasingly recognized in development assistance. The share of climate-related development assistance continued to increase over the 2021—2022 period, reaching around 33 per cent of bilateral allocable ODA, up from 30 per cent in 2019—2020. In absolute terms, climate-related bilateral allocable ODA attained USD 50 billion on average over the 2021—2022 period.

89) 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.

Figure 3.12

Development Assistance Committee members' climate related bilateral official development assistance and the share of the total, two year moving averages.



Source: OECD, 2024.

376. DFIs have been identified as essential in helping developing countries to deliver on their NDCs. This applies to not just the MDBs, but also to a range of national and regional DFIs (including the 26 national and regional DFIs represented by IDFC). By 2023, all MDBs have set dedicated post-2020 climate finance targets, as well as their climate and key sector strategies. While adaptation finance continue to increase, most MDBs are on a path to meet their internally set climate finance targets which often reach up to 2025, including through cumulative targets or share of total portfolio financing. Based on the MDB joint report for climate finance commitments in 2022, AfDB, AIIB, EBRD, EIB, IDBG, IsDB and World Bank Group have for at least one year (2021 or 2022) met their climate finance targets as a share of total portfolio financing (table 3.5).

Table 3.5

Status of multilateral development bank B post-2020 climate finance targets

MDB	Post-2020 target	2022 status
AfDB	At least USD 25 billion cumulatively for 2020–2025, prioritizing adaptation finance Climate finance will be 40 per cent of the total annual approvals, out of which at least 50 per cent is adaptation finance	USD 8.2 billion over 2020–2022 62.3 per cent of climate finance in 2022 for adaptation
ADB	Climate finance to reach USD 100 billion cumulatively for 2019–2030, with an interim target of USD 35 billion for 2019–2024 65 per cent of projects (by number of projects rather than amount of financing) on a three-year rolling average to support mitigation and adaptation during 2019–2024, reaching 75 per cent by 2030	USD 24.3 billion in 2019–2022
AIIB	50 per cent share of climate finance in approvals by 2025; expectation to reach USD 50 billion cumulatively by 2030	56 per cent in 2022, 48 per cent in 2021[a]
EBRD	More than 50 per cent of annual business investment supporting green finance by 2025[b]	50 per cent in 2022, 51 per cent in 2021
EIB	More than 50 per cent share of financing supporting climate action and environmental sustainability by 2025 15 per cent of climate finance to support adaptation by 2025	57 per cent in 2022
IDBG	At least 30 per cent share of climate finance of annual financing for 2020–2023	50 per cent in 2022, 51 per cent in 2021
IsDB	35 per cent share of climate financing of annual financial commitments by 2025	57 per cent in 2022, 5.4 per cent in 2022
NDB	40 per cent share of mitigation and adaptation finance of overall approvals in 2022–2026	35 per cent in 2022
World Bank Group	Average 35 per cent of overall financing over 2021–2025 50 per cent of IDA/IBRD climate finance supporting adaptation and resilience	5.4 per cent in 2022

Source: authors analysis of MDB joint Climate finance report 2023 in particular annex C.6. and individual MDB annual and sustainability report. Table developed from an initial WRI analysis, available at https://www.wri.org/insights/mdb-climate-finance-joint-report-2022..

a. AIIB calculated its 2022 climate financing share excluding financing approved through the COVID-19 Crisis Recovery Facility. (USD 2.39 billion out of total approved regular financing of USD 4.3 billion in 2022).

b. EBRD green finance is composed of climate finance for both mitigation and adaptation as well as finance addressing other environmental objectives. EBRD does not have separate targets for climate action.

377. Bilateral finance including public development banks and, as a subset, national development banks in developing countries, play a critical role in the climate finance landscape. The PDBs that participated in the IDFC annual green finance mapping reported green finance commitments of USD 288 billion in 2022, up by 39 per cent from the 2021 level. Adaptation finance constituted a small but growing share of PDB climate finance (USD 32 billion, up by 50 per cent from 2021). The CPI global landscape of climate finance in 2023 confirmed the substantive role of national development banks in public climate finance, accounting up for 22 per cent of global climate finance (FICS, 2023).

378. There are number of non-traditional contributors to development finance, particularly encompassing South–South flows. These include non-Annex I countries, including, among others China and the countries in Western Asia. They also includes national development banks with international operations, including the Brazilian development bank, IsDB, and AIIB. A number of these institutions are increasing their climate finance flows. Both IsDB and AIIB participate in the joint MDB report on climate finance. Climate finance flows and reporting of these flows from non-traditional actors, largely South–South in nature, remains voluntary under the Paris Agreement. Greater transparency and consistency in data, however, will support the understanding of the important role that DFIs, particularly regional and national institutions, can take towards meeting the Paris Agreement's long-term goals (Attridge, Getzel, and Gilmour, 2023; Attridge and Gouett,

2021).

379. Countries also extend financial resources that are not specifically for developmental purposes and therefore do not qualify as ODA. OOF, which can include non-concessional loans, export credits and other financial instruments, can also contribute to climate objectives. The OECD DAC reported a marked increase in climate-related OOF to developing countries in 2021–2022. According to 2024 data, climate-marked OOF attained an annual average volume of USD 3.7 billion in 2021–2022, more than double the 2019–2020 commitments. A notable trend is the increase in cross-cutting OOF reported for both mitigation and adaptation themes, while prior to 2021, climate-marked OOF was reported mainly for mitigation objectives. OOF and export credit agencies may be scrutinized in a similar manner to that being demanded of the MDBs. Few export credit agencies, for example, have explicit requirements to phase out fossil fuels or to align operations with the Paris Agreement, although some have indicated plans to do so (Shishlov et al., 2020). However, since 2021, new initiatives, including within OECD or the United Nations convened Net-Zero Export Credit Agencies Alliance, launched at COP 28, have formed to work towards consistency of these finance flows with climate objectives. [90]

380. While development finance flows and wider official public finance flows increasingly consider climate risks and seek climate-aligned activities, they remain considerably smaller than FDI. FDI, which plays a key role in economic development, recovered to pre-pandemic levels in 2021 but decreased subsequently by 12 per cent to USD 1.3 trillion in 2022, owing to global conflicts, high food and energy prices and financial sector debt pressures ((UNCTAD, 2023b). In developing countries, FDI flows increased marginally (to USD 916 billion); however, this growth was concentrated in a few large economies, while FDI flows to smaller economies or the LDCs stagnated or declined. In a positive sign, FDI to sectors of high relevance to the SDGs, including infrastructure, water and sanitation and agrifood systems increased in 2022, but it was also noted that renewable energy investment growth slowed, in particular owing to a decrease in international project financing.

3.4.4. Climate finance in the context of the broader financial system

381. Climate change can reduce the operational and economic performance of companies and assets, with a 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 loss and damage from the adverse effects of climate change, as well as the transitional 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 the impacts of climate change, be they physical or transitional (Batten, Sowerbutts, and Tanaka, 2020). There has been an increase 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 and particularly government borrowing as well as posing risks to economic growth and the stability of the financial system.

382. The concept of stranded assets has been established in the literature as assets losing value in relation to transition and physical climate change risks and is generally associated with high-emitting sectors and activities (Bos and Gupta, 2019; Carbon Tracker, 2021). However, assessing the value of stranded assets is difficult and remains subject to assumptions on the pace and scale of climate change policies and anticipated impacts. As an example, in 2022, Carbon Tracker estimated that companies holding 90 per cent of fossil fuel energy resources and reserves were exposed to around USD 600 billion of potential transition losses, and Semieniuk et. al (Semieniuk et al., 2022) estimate that global stranded assets, conceptualized as the present value of future lost profits in the upstream oil and gas sector covering 43,439 oil and gas production sites, would exceed USD 1 trillion. Studying economic impacts and transition costs, Jensen (2023) identified 40 highly fossil-fuel dependent countries and estimated expected revenue losses of over 60 per cents from oil rents in the 2023-2040 period as compared to stated policies scenarios.[91]

383. The transition to low-carbon energy systems and resilient infrastructures is particularly capital intensive

90) See for example https://one.oecd.org/document/TAD/PG(2023)7/en/pdf and https://www.unepfi.org/climate-change/net-zero-export-credit-agencies/.
91) Available at https://www.undp.org/publications/dfs-global-decarbonization-fossil-fuel-export-dependent-economies.

compared with conventional emission-intensive technologies. Upfront financing costs (commonly referred to as the weighted average cost of capital) are therefore a key determinant of access to capital, in particular for developing countries as studies show that developing countries face significantly higher sovereign borrowing costs, and higher financing costs for private sector investments ((IEA, 2023a).

384. In the energy sector, elevated risk expectations for political, currency, regulatory and off-taker and transmission risks in developing countries are noted in a survey of investment stakeholders (IEA 2024). The vulnerability to physical climate change impacts is a further concern to developing countries' financial market access. As credit ratings and financing costs depend to a large extent on general country risk and assessments, the exposure and vulnerability to adverse climate change impacts in many developing countries can directly translate to increasing borrowing costs and risk premiums, which are only expected to intensify as a result of increasing global temperatures and frequency of weather-related hazards (Cevik and Jalles, 2020; NGFS, 2022a; S&P Global, 2023). In turn, 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. In recent years, central banks and financial supervisory authorities have also initiated work for addressing physical and transition risk profiles into their macro- and micro-prudential frameworks which will enhance climate-specific stress testing and scenario development of FIs, and could over time lead to an adjustment of capital requirements or climate weighting policies ((Baranovi et al., 2021; Coelho and Restoy, 2022).

385. 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 physical and transition risks of climate change could enjoy lower borrowing costs; this requires the enhancement of a country's structural resilience through mitigation and adaptation actions. The initiation in 2023 of climate-resilient debt clauses for the debt obligations of some developing countries by MDBs and bilateral creditors is a new tool to mitigate fiscal stress in the face of climate emergencies, and countries can also strengthen financial resilience through fiscal buffers and insurance schemes.[92] Economic diversification and strong climate policy will support the management of the consequences of climate change on public finance, and research also suggests that ambitious climate policies and low interest rate environments could foster the build up of low carbon energy systems away from emission-intensive investments (Wilson, Shrimali, and Caldecott, 2023). 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.

386. Private sector actors are increasingly engaged in and driving, alongside State counterparts, platforms and innovations towards 'greening' the financial system. Chapter 4 below outlines in more detail the measures, actions and initiatives to this end, as well as the need to avoid greenwashing where commitments do not lead to real-economy actions toward reducing emissions in line with temperature goals or developing resilience.

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92) See further information on CDRCs here https://thedocs.worldbank.org/en/doc/6857abe91ef32973cfab7f689e9f00fe-0340012023/original/CRDC-Product-note-EN.pdf.


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Mapping information relevant to Article 2, paragraph 1(c), of the Paris Agreement including its reference to Article 9 thereof

4.1. Introduction

387. Article 2, paragraph 1 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, paragraph 1(a)) 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, paragraph 1(b)) addresses increasing the ability to adapt to and foster resilience to the adverse impacts of climate change. The third goal (Article, paragraph 1(c)) relates to "making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development". Article 2, paragraph 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.

388. COP 24 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 any references to Article 9 of the Paris Agreement.[93] The decision did not contain specific guidance on what information may be considered relevant for Article 2, paragraph 1(c).

389. COP 26 requested the SCF to conduct further work on mapping the available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 of the Paris Agreement,[94] and both CMA 3 and CMA 4 requested the SCF to synthesize the views of Parties, operating entities of the Financial Mechanism, international FIs and other stakeholders in the financial sector regarding ways to achieve Article 2, paragraph 1(c), of the Paris Agreement, including options for approaches and guidelines for implementation.[95] Furthermore, CMA 4 decided to launch the Sharm el-Sheikh dialogue between Parties, relevant organizations and stakeholders to exchange views on and enhance understanding of the scope of Article 2, paragraph 1(c), of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement, which consisted of two workshops held in 2023 and a report on their deliberations.[96] CMA 5 decided to continue and strengthen the Sharm el-Sheikh dialogue, including two workshops per year and an annual report up to 2025 and CMA 7.[97]

390. The mapping exercise in this chapter aims to reflect efforts that have, and are being, taken to move finance flows towards climate action in the context of sustainable development. It outlines trends, emerging risks, opportunities and insights into the mapping information, complementary to the methods covered in chapter 1.6 above.

4.2. Approach

391. A key challenge in mapping information relevant to Article 2, paragraph 1(c), of the Paris Agreement and in ways to achieving Article 2, paragraph 1(c), of the Paris Agreement, is in the disparate views on what is in the scope. The fourth BA approach was to map information for which the actors in the financial sector or those outside the financial sector but who direct finance flows, including, among others, corporates, governments, and civil society actors, presented their activities as relevant to achieving the goals of the Paris Agreement.

392. Since the fourth BA, two rounds of synthesis of views from Parties and non-Party stakeholders and a further mapping of relevant information have been carried out by the SCF. In addition, three workshops under the Sharm el-Sheikh dialogue on the scope of Article 2, paragraph 1(c) of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement, including a report on the deliberations on the dialogue in 2023,[98] and the first global stocktake which concluded in 2023, have progressed the discussion.

393. Furthermore, since the publication of the fourth BA, there has been increased engagement by private and public actors that may be relevant to the goal under Article 2, paragraph 1(c) of the Paris Agreement. This engagement can be grouped into three broad categories: commitments to align the activities of public and private institutions with the goals of the Paris Agreement;

93) Decision 4/CP.24, para. 10.
94) Decision 4/CP.26, para. 13. The mapping is available at https://unfccc.int/sites/default/files/resource/cp2022_08a04__cma2022_07_a04.pdf?download.
95) Decisions 10/CMA.3, para. 2, and 14/CMA.4, para. 4. The syntheses are available at https://unfccc.int/sites/default/files/resource/cp2022_08_add03_cma2022_07_add03_adv.pdf?download and https://unfccc.int/sites/default/files/resource/cp2023_02a03_cma2023_08a03.pdf?download.
96) Decision 1/CMA.4, para. 68.
97) Decision 9/CMA.5, para. 8.
98) Available at https://unfccc.int/documents/633427

regulatory and supervisory authorities publishing guidelines and increasing expectations for reporting on climate-related financial risk disclosure; and policy and research outputs emerging from civil society and academia. The engagement highlights that the growing landscape includes heterogeneity in use cases, ambition levels, metrics, indicators, and coverage of finance flows and stocks, sectors, emissions in scope and climate scenarios.

394. At CMA5, the first Global Stocktake assessed collective progress towards achieving the goals of the Paris Agreement and included relevant section on financing climate action. It is clear there is a need for scaling support to developing countries and the role of public finance therein, but the global stocktake also recognizes the role of policy guidance, incentives, regulations and enabling conditions for private actors to reach the scale of investment required for the global transition and the role of governments, central banks, commercial banks, institutional investors and other financial actors, in doing so.[99] The global stocktake outcome recognizes that Article 2, paragraph 1(c) of the Paris Agreement is complementary and not a substitute for Article 9 of the Paris Agreement. Thirteen global leaders, signed at COP28 the UAE Leaders Declaration on a Global Climate Finance Framework. The 10 areas of action identified engage many of the actors and flows of resources that are mapped as relevant under Article 2, paragraph 1(c), of the Paris Agreement. The Declaration also acknowledges and seeks to build on a growing number of initiatives that are overlapping in thematic content. These include, for example, the Paris Pact for People and the Planet, Bridgetown Initiative, Accra–Marrakech Agenda, G20 New Delhi Leaders' Declaration, and African Leaders Nairobi Declaration on Climate Change and Call to Action (see Table 4.1 below).

395. Recent years have seen growing attention towards reform of the international financial architecture. The financial architecture reform or evolution agenda is not only climate-specific. The degree to which climate action is pursued and promoted in any international financial architecture reform, as it might compete with other, often interacting, risks that influence economic and financial systems, remains to be seen. These efforts broadly refer to changes in the network of institutions, markets, regulations, and mechanisms that enable the flow of capital and financial transactions across countries. It is included in the United Nations Secretary-General's vision for the years ahead (United Nations, 2023), and the Sharm el-Sheikh Implementation Plan acknowledged that a transformation of the financial system its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors, will be required to scale finance for climate action.[100] As such, efforts toward financial architecture reform or evolution will capture many of the same actors and flows of resources that are considered in previous iterations and in this iteration of mapping information relevant to Article 2, paragraph 1(c), of the Paris Agreement.

396. Agendas, some of which predate the Paris Agreement, remain relevant and evolving and illustrate interrelated concepts of finance for the climate, the environment and sustainability more broadly. The Addis Ababa Action Agenda, established in 2015, was the outcome of the Third International Conference on Financing for Development. It sought to outline a comprehensive view towards the financing of sustainable development. This included consideration of domestic resources, domestic and international private business and finance, international development cooperation, international trade as an engine for development, debt and debt sustainability, addressing systemic issues, and science, technology, innovation and capacity building.[101] A number of countries have since created integrated national financing frameworks, as planning and delivery tools, including financing strategies. While at COP15 of the Convention on Biodiversity, the Kunming–Montreal Global Biodiversity Framework was adopted[102], which includes a pathway to 2050 in which targets have been set to eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by USD 500 billion a year by 2030, increasing the level of financial resources from all sources, mobilizing at least USD 200 billion by 2030, capturing quantitative targets for developed countries, domestic resource mobilization and leveraging private finance (Lopez Carbajal, Solano Acuna, and Mateus, 2024).

397. This chapter therefore builds on the approach in the fourth BA, CMA mandated reports, the findings of

99) Decision 1/CMA.5, paragraph 70 and 96
100) Decision 1/CMA.4, paragraph 55
101) Available at https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf
102) Available at https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf

the interim outputs of the Sharm el-Sheikh dialogue, including workshop deliberations, submissions and report, and taking into account the synthesis and outcome of the first global stocktake, in identifying information relevant to Article 2, paragraph 1(c), of the Paris Agreement including its reference to Article 9 thereof, and developments from public and private actors in existing and new initiatives, where they have relevance to both domestic and international, as well as public and private finance flows related to climate action.

4.3. Mapping the contexts of Article 2, paragraph 1(c), of the Paris Agreement including its reference to Article 9 thereof

398. There are a number of contextual issues that arise in the mapping of Article 2, paragraph 1(c), including its reference of Article 9 thereof. This section, and the chapter more generally, presents these issues without attempting to reconcile these into a common vision. These might be characterised as those that relate to grappling with the extent and diversity of finance actors and finance flows addressed by the goal, the interpretation of the Article, or of the interpretation of how wider concepts and provisions in the Paris Agreement link to the achievement of Article 2, paragraph 1(c), of the Paris Agreement.

399. Information relevant to Article 2, paragraph 1(c), of the Paris Agreement encompasses a significant scale of finance and scope of finance flows, including investment and financing, as well as stocks[103][104][105]. ,Submissions and interim findings also commonly suggest that there are a variety of actors that take actions – be they voluntary or involuntary, that affect finance flows and so impact on Article 2, paragraph 1(c), of the Paris Agreement. These actions are influenced through a diversity of mechanisms (e.g. policy, regulation, financial instruments, principles, actor-led coalitions and forms of development cooperation). There is much complexity, therefore, in disentangling interlinkages and causal relationships between layers of actors and mechanisms (figure 4.1). Furthermore, individual efforts to direct finance flows do not guarantee real-economy impact on emission reductions or climate resilience. For example, portfolio-level target-setting may transfer ownership or financial service provision, rather than shifting underlying economic activities and investee companies. Conversely, a focus on shifting investment only could miss filling capacity needs and financial and macro-economic policy measures seeking to shift the differential costs or quality of financing between countries and sectors (see chapter 3.4.4 above).

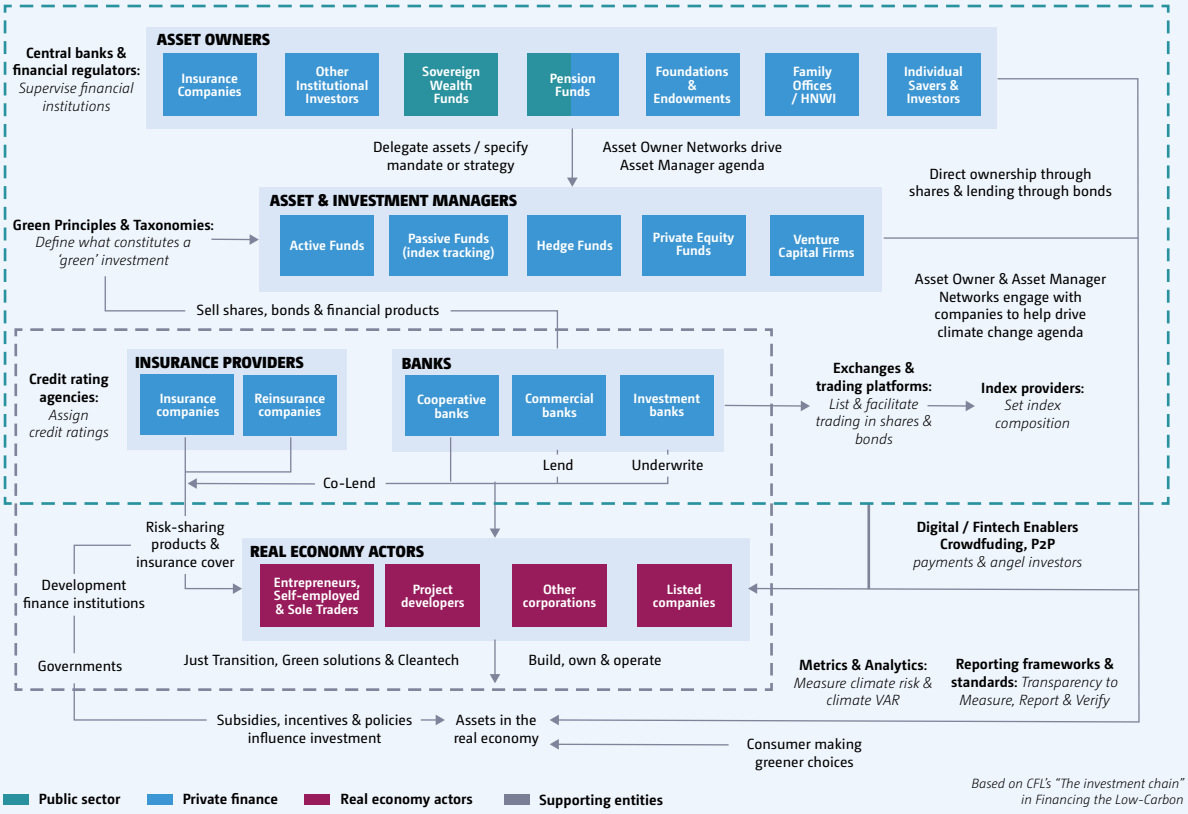
103) In accordance with IPCC AR6 WGII Chapter 15 (2022), investment is considered that made in a physical asset or intangible asset used over time such as bonds or stocks and taking into account costs (the capital expenditures, operating expenditures and any financing costs).

104) In accordance with IPCC AR6 WGII Chapter 15 (2022), financing refers to securing the money needed to cover investment or project costs, including debt and equity, as well as grants.

105) Stocks refer to shares in publicly listed companies, some of which may contribute positively or negatively, or be neutral, to addressing climate change.

Figure 4.1

Connecting actors with their actions and real economy contributions.



400. There are several aspects of finance flows that can be accommodated in a perception of what is consistent with low-emission, climate-resilient development pathways. The SCF synthesis of views in 2023 noted that different concepts are being used to reflect different understandings including on directing, aligning, orienting, shifting or attracting finance flows (SCF, 2023a). And even where the same words are used, the underlying conceptualization may remain different. Furthermore, the SCF report notes that while all submissions referred to a scaling up of finance flows for climate action in the pursuit of Article 2, paragraph 1(c), of the Paris Agreement not all included shifting or scaling down of investments and finance that could be deemed to be inconsistent (regardless the of scale considered).

401. Article 2, paragraph 1(c), of the Paris Agreement refers to the finance flows that are consistent with a pathway towards low greenhouse gas emissions and climate-resilient development, but most actions to date have focussed on mitigation and decarbonization targets. The IPCC SAR (2022) defines climate-resilient development as "a process of implementing climate action, including greenhouse gas mitigation and risk reduction adaptation measures, to support sustainable development for all". The SCF synthesis of the views of Parties, operating entities of the FIs, international financial institutions and other stakeholders in the financial sector, found that while there was general concurrence that fostering climate-resilient development is a key component of the goal in Article 2, paragraph 1(c), of the Paris Agreement current approaches, methodologies, actions and efforts aimed at adaptation and resilience are less represented and underdeveloped (SCF 2023a, para 18). The recognition that climate action and sustainable development go hand in hand (UNFCCC, 2023b), provides further support to holistically centre climate-resilient development in the pursuit of Article 2, paragraph 1(c), of the Paris Agreement rather than considering mitigation or adaptation in isolation.

402. While Article 2, paragraph 1 (c), of the Paris Agreement refers to a collective effort of all Parties,

in line with nationally led approaches, in accordance with the bottom-up nature of the Paris Agreement, any implementation of pathways to low-emission, climate-resilient development will vary by and within Parties. As such the needs and priorities of Parties in their pursuit of the implementation of Article 2, paragraph 1(c), of the Paris Agreement, will differ, in pursuit of their NDCs and NAPs given national circumstances (e.g. market structure, depth and integration into the global financial system as well as human and institutional capabilities) influencing the starting point, possible end points and a route to get there, with the collective goals of the Paris Agreement in mind.

403. A focus on national needs and priorities in the pursuit of Article 2, paragraph 1 (c), of the Paris Agreement suggests a need for policies and measures that respond to national and local enabling environments and socio-political context, allowing for an orderly, equitable and just transition. This points to the need for just transition approaches and policies in implementing Article 2, paragraph 1 (c), of the Paris Agreement. The means of implementation for just transition in the context of Article 2, paragraph 1(c) of the Paris Agreement is recognized in the just transition work programme[106] and decision 1/CMA.3, paragraph 85 which "recognizes the need to ensure just transitions... including through making financial flows consistent with a pathway towards low GHG emission and climate-resilient development, including through technology transfer and provision of support to developing countries." There has been considerable growth in initiatives addressing transition finance but variation in the degree to which they understand or address justice (ASEAN Capital Markets Forum, 2023; G20 Sustainable Finance Working Group, 2022; OECD, 2023d; Robins et al., 2023), (see also chapters 1.3.3 and 1.6.1 above).

404. Nationally led responses to Article 2, paragraph 1 (c), of the Paris Agreement will also need to take into account possible and complex transnational effects, given the interconnectedness of financial and economic markets, for example in the case of carbon pricing schemes (CFMCA, 2023; Kreibiehl et al., 2022; Parry, Black, and Zhunussova, 2022). Parties to the Paris Agreement have acknowledged such potential issues in the outcomes of the first global stocktake, in the context of a supportive and open international economic system[107] and in the context of ongoing discussions under the Sharm el-Sheikh dialogue on how to avoid negative impacts, among others, on international trade, investment flows and development finance in implementing Article 2, paragraph 1(c), and Article 9. Impacts can be both positive and negative and emerge at different scales. For example, globally instituted policies, strategies and regulations for directing financial flows could contradict nationally determined policies, or financial regulation in one country could affect a neighbouring country or trade partner (Agénor, Jackson, and Pereira da Silva, 2024).

405. Actors operate within their institutional mandates and operations and with the tools at hand. Private finance actors acting with fiduciary responsibilities are often agnostic to climate goals. While the breadth of such private finance actors, and relevant initiatives (see chapter 4.4.4. below), remain relevant to the transformation of the financial system and real economy, they have limited accountability to the CMA. Both the SCF 2023 review of submissions and the political outcomes of the global stocktake echo the guiding role of governments to create the right enabling environment for consistent finance flows and in fostering coherent, coordinated, ambitious and transparent action in both the public and private sector.

406. Article 2 paragraph 2, places Article 2, paragraph 1(c), of the Paris Agreement in the context of common but differentiated responsibilities and respective capabilities and national circumstances. It has been proposed that under common but differentiated responsibilities and respective capabilities and national circumstances, developed countries have an imperative to move first and deploy domestic and international policies to ensure financial actors in their jurisdictions are climate-aligned, in the light of the principles of equity and common but differentiated responsibilities outlined in Article 2 paragraph 2, of the Paris Agreement and given a concentration of private financiers of GHG-incentive activities in this geography (UNCTAD, 2023; Robertson 2023). This also reflects that while capital is largely mobilized domestically, capital markets have more depth in developed countries, financiers are largely concentrated in developed countries[108], and a transfer of flow to developing countries will be required to deliver a low-emission, climate-resilient transition globally.

106) Available at https://unfccc.int/sites/default/files/resource/cma2023_16a01E.pdf
107) Decision 1/CMA.5, para 154
108) See IMF. 2023. Financial Development Index Database. Latest Update Date: 07/26/2023. Available at https://data.imf.org/?sk=f8032e80-b36c-43b1-ac26-493c5b1cd33b.

407. There are existing obligations of developed countries to provide finance, technology and capacity-building support to developing countries for climate action. Article 9 of the Paris Agreement confirms that the obligation of developed countries towards developing countries is the provision of resources "in continuation of their existing obligations under the Convention" and that, "as part of a global effort, developed country Parties should take the lead in mobilizing climate finance from a variety of sources, instruments and channels, noting the significant role of public funds". While the relationship, if any, between Article 2, paragraph 1(c) and Article 9 is not defined in the Paris Agreement, these sources are largely managed by different actors whose actions may either directly or indirectly contribute towards achieving the Paris Agreement goals and so may be considered under the scope of Article 2, paragraph 1 (c).

408. The first global stocktake outcomes highlight that implementing Article 2, paragraph 1(c), of the Paris Agreement should not substitute or diminish the existing obligations of developed countries under Article 9. There remain differing interpretations of the scope and nature of flows related to Article 2, paragraph 1 (c) and Article 9. The 2023 SCF synthesis of views, paragraph 31, categorizes interpretations as:

- Article 2, paragraph 1(c), of the Paris Agreement being an aspirational goal for all Parties, where Article 9 resources are used to deliver the means of implementation and support to developing countries to implement national actions towards Article 2, paragraph 1(c), of the Paris Agreement;
- Article 9 is seen as a subcomponent of the broader set of finance flows and actions relevant to Article 2, paragraph 1(c), of the Paris Agreement implementation, that together seek to deliver Article 2, paragraph 1(a) and paragraph 1(b) of the Paris Agreement.

409. A number of bilateral and multilateral actors highlighted in chapter 3 above, have engaged to seek to align finance flows within their own channels, institutions and jurisdictions with the Paris Agreement. Different approaches and understandings are evident in these approaches to tackle the tension between a national and collective response to the implementation of Article 2, paragraph 1(c), of the Paris Agreement, including challenges of national sovereignty, conditionality on climate or development finance provision and/or the degree to which domestic action in developed countries is subject to the same scrutiny of alignment with the Paris Agreement.

4.4. Mapping of information and trends relevant to Article 2 paragraph 1(c) of the Paris agreement, including its reference of Article 9 thereof

4.4.1. Consistency of financial flows over time

410. The contribution of Working Group III to the AR6 states that "[a]ssessing climate consistency or alignment implies looking at all investment and financing activities, whether they target, contribute to, undermine or have no particular impact on climate objectives". This all-encompassing scope notably includes remaining investments and financing for high GHG emission activities that may be incompatible with remaining carbon budgets, but also activities that may play a transition role in climate mitigation pathways and scenarios (Kreibiehl et al., 2022, p.1553). The IPCC further concludes with high confidence that "[p]rogress on the alignment of financial flows towards the goals of the Paris Agreement remains slow and tracked climate finance flows are distributed unevenly across regions and sectors" (IPCC, 2022).

411. The scale and volume of all investment and financing activities is hard to understand. It however, can be illustrated by various types of finance flows and stocks under the purview of different owners and financial actors, noting that these finance flows and stocks may partially overlap, depending on financial ownership or management structures. They may include:

- Total global market capitalization of listed equity of USD 109 trillion in 2023 (SIFMA, 2024) and an estimate share of emerging market listed equity of 27 per cent[109].
- World aggregate GDP of USD 101 trillion (of which around USD 92 trillion is in high-income and upper-middle-income countries (or, USD 27 trillion in North America, USD 25 trillion in Europe and Central Asia and USD 30 trillion in East Asia and the Pacific)) and world gross capital formation (which refers to improvements of assets and increased stocks of goods) of USD 27.76 trillion in 2022 (World

109) Available at https://www.goldmansachs.com/intelligence/pages/emerging-stock-markets-projected-to-overtake-the-us-by-2030.html

Bank, 2023a).

- Government expenditure under the purview of ministries of finance estimated at around USD 100 trillion (Zouhar et al., 2021)
- Rated debt instruments of USD 82 trillion globally, of which sovereign debt of advanced economies of around USD 31 trillion and sovereign debt of emerging economies of USD 2.5 trillion (Moody's 2023)[110];
- Assets of global public pension funds totalling USD 21.3 trillion (UNCTAD, 2023);
- Annual investment or lending volume of PDBs of around USD 2.5 trillion and total assets of PDBs of about USD 25 trillion (FICS, 2023);
- ODA flows from DAC member States of USD 211 billion in 2022 (OECD, 2024e);

412. The IPCC (2022) identified that there is, in principle, sufficient capital for the transition, but that the current distribution and flow of such capital is not readily available to support the transition, pointing to a mismatch of the policy and market frameworks regulating finance flows. Reflecting on the scale of the investments needed to reach the goals of the Paris Agreement in 1.5 °C aligned temperature scenarios, further sources point out that the current size of the development finance system will not suffice to address climate-related needs alone while maintaining adequate funding for other developmental purposes (Olabisi, 2024).[111] Furthermore, a high degree of coordination will be required to direct or reallocate the large volumes of capital in the global financial system towards finance gaps, in particular in and towards developing countries, given the scale and diversity of financial flows and responsible actors, including international FIs and financial supervisory authorities ((Brunetti et al., 2021; IMF, 2023a; IPCC, 2022b; NGFS, 2024c; UNCTAD, 2023a).

413. As a result, while countries and non-State actors are discussing and taking actions that are relevant to Article 2, paragraph1(c), of the Paris Agreement, different views on and approaches to the goal remain. This chapter seeks to identify trends in key sets of actors and actions, with a focus on identifying changes over time, emerging risks and opportunities.

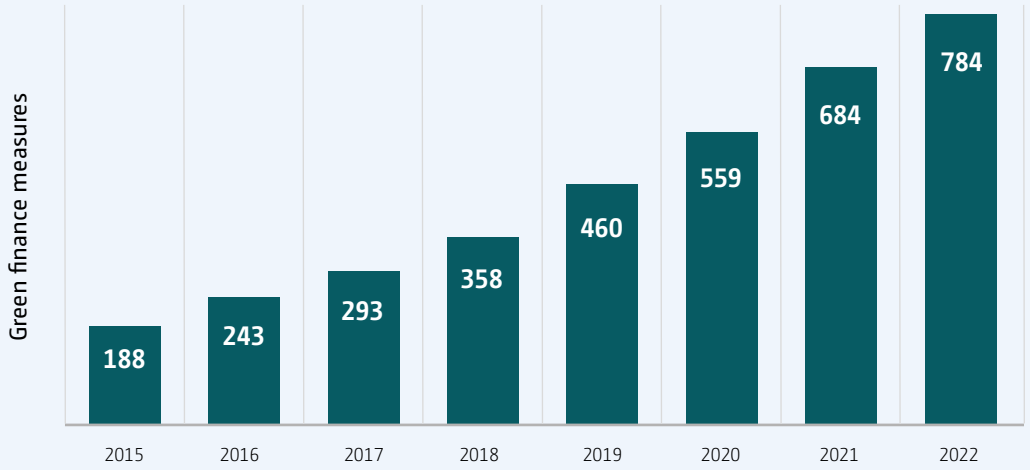
4.4.2. Policies and measures relevant for implementing Article 2, paragraph 1(c)), of the Paris Agreement over time

414. In the 2021—2022, there was a 40 per cent increase in the number of policy and regulatory measures for 'green finance' compared with 2020, bringing the total to 784 measures registered in more than 100 jurisdictions globally by the end of 2022, according to the Green Finance Measures Database. The measures included have been classified into five broad areas, namely reallocation and raising of capital; risk management; responsibility; reporting and disclosure; and, reset (referring to the alignment of groups or financial systems including through the use of roadmaps). As such, they refer to policy and regulatory measures put in place by public authorities such as governments, central banks, financial regulators and public finance institutions.[112] Of those, 38 per cent originated from developing and emerging economies and 62 per cent from developed countries. Since the adoption of the Paris Agreement in 2015, an increase of green finance policy and regulatory measures by more than 300 per cent has been recorded.

110) Available at https://www.moodys.com/web/en/us/about/insights/data-stories/2023-environmental-credit-risk-exposure.html
111) Available at https://www.imf.org/en/Publications/fandd/issues/2024/03/Paying-Africa-climate-bill-Michael-Olabisi.
112) Available at https://www.greenfinanceplatform.org/financial-measures/browse.

Figure 4.2

Growth in cumulative green finance policy and regulatory measures.



Source: Green Finance Measures Database, 2024

415. The estimated value of the global sustainable finance market (funds, bonds and voluntary carbon markets) is USD 5.8 trillion in 2022 (UNCTAD, 2023a), of green bond issuances in 2022 is USD 487 billion (CBI, 2023), and of the impact investing and gender-lens investing market is USD 1.2 trillion and USD 10 billion respectively (UNDP, 2023). In conjunction with these figures, net zero target setting and portfolio alignment methods have emerged in FIs and private sector actors to align their financial portfolios over time.

416. Thus, while there is no dedicated guidance for responding to the goal set out in Article 2, paragraph 1(c), of the Paris Agreement, some countries have articulated policies and measures in domestic frameworks that speak to the goal, and public and private sector institutions in the financial sector are increasingly articulating their strategic efforts to align with the Paris Agreement, including Article 2, paragraph 1(c) therein.

Financial market regulation and policies

417. Regulatory authorities, including, but not limited to central banks, set regulations and standards governing finance and investment flows, as well as capital stock. They also deal with monetary policy that influences, for example, spending, borrowing and employment such as through interest rates. Regulators and supervisors are increasingly acknowledging the threat that climate change poses to the financial stability of an economy, either through physical risks or transitional risks (Kreibiehl et al., 2022).

418. NGFS, launched in 2017, has facilitated the sharing and exchange of best practice in managing climate risks. As at March 2024, the membership included 138 members and 21 observers. The work of NGFS includes both microprudential regulation, which deals with individual FIs, and financial and economic systemic risks (macroprudential), as well as mobilizing capital for green and low-carbon investments in the broader context of environmentally sustainable development, for example to ensure financial stability and limit foreign exchange risks for scaled-up blended finance approaches in developing countries,[113] and developing guidelines for and mainstream transition planning of FIs.[114]

419. Many central banks and supervisors have introduced climate scenario stress testing at the microprudential level (for individual institutions) and exploratory macroprudential tests, as well as climate-related adjustments to their non-monetary portfolios (such as measures for aligning corporate bond holdings with 1.5 °C temperature goals, positive screening of ESG-relevant assets or introducing green bond and credit

113) https://www.ngfs.net/en/communique-de-presse/ngfs-publishes-document-scaling-blended-finance-emdes-0.
114) https://www.ngfs.net/en/communique-de-presse/ngfs-publishes-package-reports-relating-transition-plans.

schemes).[115] In exploring options to incentivize climate-positive financial decision-making while adhering to their primary mandate to maintain price stability and contain inflation, financial regulators have had initial experiences with mainstreaming the climate into monetary policy operations, with tools for adjusting credit operations, asset purchase schemes or collateral policies (NGFS, 2024a) Another impactful lever that has been discussed is the adjustment of sovereign bond and foreign reserves holdings according to climate considerations, given that central banks are estimated to hold around 20 per cent of domestic sovereign bonds (Monnin et al., 2024). So far, central banks report taking gradual and cautious approaches to integrating climate considerations into their core operations in order to minimize trade-offs and learn about potential risks, while also indicating that climate-related actions may be scaled up over time (NGFS, 2024a). There are concerns by some regulators that climate change and the energy transition may impact on price stability and lead to rapid market shifts and increased climate and financial stability risks in a range of economic sectors and exposed financial market segments, with a corresponding need to calibrate transition support with the primary policy objectives of the central banks.[116] Hence, central banks and supervisors have pointed to their limits of directly influencing climate outcomes and highlighted the key role of governments to implement ambitious climate actions and regulations that foster orderly shifts towards climate-aligned economies, as well as increased climate-consistent private capital allocation, which are ultimately needed to mitigate the economic and financial tail risks of uncontained climate change.[117]

420. An increasing number of regulatory and supervisory authorities are mandating climate-related disclosures in financial markets for entities subject to their jurisdictions, including physical and transition-related climate risks (IPCC, 2022b). These jurisdictions include, among others, Australia, Brazil, Canada, the EU, China, India, New Zealand, the Republic of Korea, Switzerland, the United Arab Emirates, the United Kingdom, and the United States. Some financial supervisory authorities have issued specific guidance and reporting requirements for different asset classes and financial actors, covering investors, banks and insurers.

421. The importance of corporate level climate-related data for policy-makers and financial markets is that they provide a real-economy link to inform risk assessments and decision making for transition planning and public policy development, determine physical climate risks and inform the carbon footprint for public and private investments. Notable since the fourth BA, ISSB, created in 2021, has developed two sustainability disclosure standards seeking to harmonize reporting from corporates across jurisdictions. Through a long period of consultation, ISSB standards seek interoperability with existing standards and other frameworks and have received backing from the Task Force for Climate-Related Financial Disclosure, the G7, the G20, the International Organization of Securities Commissions, the Financial Stability Board, African finance ministers, and finance ministers and central bank governors from more than 40 jurisdictions. Since its launch in early 2023, a number of governments have committed to implementing disclosure rules based on ISSB (such as Brazil, Canada, Japan, Mexico, Singapore and United Kingdom) or have published their own guidelines, which are globally interoperable while reflecting various jurisdictional or environmental considerations (such as China, EU, India, Republic of Korea and United States).

422. This harmonization builds on the growth in sustainable finance frameworks and taxonomies of green or sustainable activities as outlined in the fourth BA. Chapter 1.3 identifies 14 jurisdictions that have included transition guidance or elements in their sustainable finance taxonomies. Such taxonomies often remain focussed on low-emission activities, while adaptation components, where they exist, are split between activities being made more resilient and enabling activities (such as technology for early warning systems).

423. Given the granularity and data intensity of climate-related disclosure requirements and other sustainable finance tools such as taxonomies and transition planning, current frameworks mainly apply to large listed financial and non-financial companies. Most exempt micro, small and medium-sized enterprises from climate-related disclosure and sustainable finance taxonomy frameworks citing data and capacity constraints, and the aim of reducing administrative burden for smaller enterprises. Current frameworks also often apply phase-in periods beyond 2025 or even 2030 in order to allow real-economy actors longer lead times for gathering data and introducing sustainability-related governance processes. It remains unclear how relevant sustainable public finances, and household expenditures could be included, and

115) For example in the EU, France, or Bangladesh and China as early adopters of preferential green credit schemes. https://www.idos-research.de/uploads/media/Fostering_Green_Finance_in_Asia_Volz.pdf.
116) See https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2821~f008e5cb9c.en.pdf and https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2821~f008e5cb9c.en.pdf
117) See for example https://www.ngfs.net/sites/default/files/monetary_policy_and_climate_change_-_key_takeaways_from_the_membership_survey.pdf and NGFS submission to the SCF in 2023.

how international cross-border investments and capital expenditures could be captured in existing, jurisdiction-specific, disclosure frameworks and sustainable finance tools.

424. International financial policy and norms will also play a role. These can support consistency across the operations of finance ministries, central banks and financial sector actors. The Basel regulatory guidelines relate to capital adequacy and stress testing in international banking, for example, and in April 2024, the Basel Committee on Banking Supervision updated its core principles for effective banking supervision, which serve as an overarching guideline and minimum standards for prudential regulation and included climate change as a material risk to financial stability[118]. This acknowledgement marks a further step in embedding climate change considerations in the functioning and supervision of global financial markets.

Fiscal policies and public expenditure

425. Governments channel public finance flows principally through finance ministries, including through budget allocations, taxes, subsidies and other market mechanisms. These can flow through sector-level ministries, subnational government structures, State development banks, State-owned enterprises, specialist agencies and other public authorities. The Coalition of Finance Ministers for Climate Action, created in 2019, pursues the purpose of mainstreaming climate change aspects into economic and financial policies and public finance, and promotes domestic and global action on climate change. In 2021, the Coalition set out the objectives of its work in the six Helsinki Principles. In 2023, the Coalition published a guide on strengthening the role of finance ministries in climate action, which included 15 transformative actions, a set of options to help countries enhance the core functions and capabilities of ministries of finance, in accordance with national circumstances, in a way that would support pathways to a low-carbon economy (CFMCA, 2023). Policies constitute a third of these actions and are explored further below, acknowledging that actions that build capabilities to act and work collaboratively with others are further substantive recommendations from the Coalition.

426. Where implemented, domestic carbon pricing instruments have incentivised low-cost emissions reduction measures, but have been less effective, on their own and at prevailing prices, to promote higher cost measures necessary for further reductions. An increasing number of governments have recognized carbon pricing as an effective method to integrate the costs of climate change into economic decision-making, thereby encouraging climate action.

427. In a challenging macro-economic environment and in the context of the energy crisis, countries largely maintained existing carbon pricing schemes; globally, 73 of such instruments covering around 23 per cent of global emissions were in place in 2023. Carbon pricing instruments generated USD 95 billion in revenue globally. As compared with 2021, this is an increase of about USD 10 billion in revenues and 5 new instruments, while global emission coverage remained the same. Almost 40 per cent of carbon pricing revenues are earmarked by governments for green spending and another 10 per cent for household or business compensation. A notable development is that existing schemes are being progressively extended beyond the traditional focus sectors of energy and industry to include the buildings and transport sectors, including in some European countries. From 2025 onward, New Zealand will become the first country in the world to expand the coverage of carbon pricing to the agricultural sector (World Bank, 2023c).

428. As in previous years, carbon pricing measures remain concentrated in high-income countries in North America and Europe. The EU ETS alone generated about 44 per cent (USD 42 billion) of global carbon pricing revenues in 2022. Furthermore, while some jurisdictions have seen significant price increases in recent years, carbon prices remain low at the global level as compared with the levels required to achieve the Paris temperature goals. Only nice jurisdictions registered carbon prices in the suggested 2030 carbon price corridor of USD 61—122 per t/CO2eq, based on the recommendations in the report of the High-Level Commission on Carbon Prices and adjusted for inflation (World Bank, 2023b).

429. Non-pricing measures have been instituted to implement national and/or regional climate initiatives. Some countries prefer these measures due to their national circumstances in accordance with the IPCC's (2023b) finding that effective policy packages would be comprehensive, consistent, balanced across objectives and tailored to national circumstances. Non-pricing approaches include policies, targets, initiatives, as well

118) Available at https://www.bis.org/bcbs/publ/d573.htm.

as standards, awareness, and international cooperation and financial tools. For example, the Middle East Green Initiative also adopts the circular carbon economy approach to advance climate objectives in the Middle East region through a suite of initiatives.[119]

430. As noted in chapter 3.4 above, record levels of fossil fuel subsidies were reported by IMF in 2023, which estimated explicit fossil fuel subsidies at USD 1.3 trillion in 2022, up from USD 500 billion in 2020 (Black et al., 2023). Phasing out fossil fuel subsidies has the potential to free up fiscal space and stabilize government revenues as fossil fuel prices fluctuate. It is emphasized that subsidy removal can have adverse distributional impacts that in some cases can be mitigated by redistribution measures (IPCC, 2023b), Fossil fuel prices are not the best way to drive clean energy transitions. Imbalanced or poorly sequenced approaches to transitions, in which fuel supply is cut ahead of demand, create clear risks of further price spikes, and there is no guarantee that such episodes are unambiguously good for transitions. As noted in the World Energy Outlook 2022, "high fossil fuel prices are no substitute for climate policies."(IEA, 2022c). In practice, concerns about affordability can reduce the attention and money that policymakers devote to clean energy. They can also in some cases prompt higher use of more polluting fuels, i.e., a switch from gas to coal. And the inflationary pressures push up borrowing costs to the detriment of capital-intensive clean energy investments. G20 and G7 commitments to phase out inefficient fossil fuel subsidies in 2009 and the encouragement to phase them out by 2025. The consistency of agriculture and land-use subsidies with low-emission, climate-resilient development has also been raised (see chapter 3.4 above). As noted in chapter 1 above, Finland, Italy and Norway assess both the positive or negative impacts of public subsidies on climate or the environment outside of regular budget tracking exercises (Choi et al., 2023). Such tracking may have utility across multilateral agendas, with the Kunming—Montreal Global Biodiversity Framework, agreed in 2022, for example, seeking to "phase out or reform incentives, including subsidies harmful for biodiversity, in a just, fair, effective and equitable way" and attributes a quantitative goal of at least USD 500 billion a year by 2030.[120]

431. Other tools, such as CPEIR and budget tagging, have also been used to identify how climate change is integrated into national and subnational budget processes; however, the degree to which they have led to a shift in finance flows towards low-emission, climate-resilient development is not clear. Green public financial management frameworks that factor climate considerations into planning, budgeting and reporting public funds are, however, considered of particular importance with regard to managing financial risks and ensuring the availability of finance in the face of physical climate impacts (OECD, 2024c; International Monetary Fund (IMF), 2022). The work of the transitional committee on the operationalization of the new funding arrangements for responding to loss and damage and of the Fund referred to in decisions 1/CP.28 and 5/CMA.5, including the synthesis reports and the workshops, highlighted in 2023 the relevance of financial stability support and climate-resilient public financial management frameworks for coping with climate impacts.[121] Recognizing the existence of regional risk pools, such as the Africa Risk Capacity Group, the Caribbean Catastrophe Risk Insurance Facility and the Pacific Catastrophe Risk Assessment and Financing Initiative, the limited coverage and high premiums of climate risk insurance for governments, businesses and households in developing countries was noted. As climate hazards increase in quantity and severity globally, concerns about the mid- to long-term insurability and pricing or affordability of climate-related risks have been expressed by regulators and the insurance sector (EIOPA, 2023; OECD, 2023c).

432. Multiple approaches for strengthening domestic climate- and disaster related financial resilience have been identified beyond insurance mechanisms, such as comprehensive national emergency and contingency funds and budget lines, development financing instruments for immediate liquidity support, such as the World Bank Groups Catastrophe Deferred Drawdown Option, or policy-based lending facilities, and most recently the adoption of climate-resilient debt clauses in the bonds and loans of public and private creditors to pause debt repayments in the face of climate emergencies. These financial instruments, as well as technical assistance and capacity building for public and private financial resilience, are supported by a range of MBDs and DFIs, as well as by IFIs in developing countries. IMF established in 2022 the Resilience and Sustainability Trust, which provides highly concessional and long-term loans to countries under preconditions of implementing fiscal stability reforms, for example the adoption of

119) Available at https://www.greeninitiatives.gov.sa/about-mgi/
120) Available at https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf
121) FCCC/CP/2023/9–FCCC/PA/CMA/2023/9.

disaster risk financing policies, and introducing climate factors into public—private partnership facilities and infrastructure investment planning[122]. More broadly, IMF has identified climate change as a macrocritical aspect for the financial soundness of countries and has advanced its conceptual work and country-level engagement and surveillance, including in its regular Article 4 consultations, to mainstream climate -sensitive public financial management frameworks, to enhance climate-related data and information architecture and to support fiscal policies for mitigation and adaptation investments and carbon pricing and for disincentivizing fossil fuel subsidies.[123]

433. Governments also have the potential to reduce emissions and pursue adaptation when they purchase goods, services and other works from non-governmental actors, known as public procurement. Globally, public procurement was estimated to amount to USD 13 trillion in 2019 and to represent 15 per cent of global GDP (Fagan et al., 2022). The World Economic Forum has estimated that 15 per cent of total GHG emissions come from public procurement (WEF, 2022), which is concentrated in the sectors of defence, transport, energy, industry, construction and waste management. The concept of green public procurement, through which governments can reduce their climate and environmental impact and incentivize a broad range of sectors and companies to adopt more sustainable, resilient and less emissions-intensive business practices, is referenced in the Government Procurement Agreement of the WTO and also features as one of the commitments within the Coalition of Finance Ministers for Climate Action.

434. As noted in chapter 3.4 above, the issuance of sovereign and subsovereign green bonds raises funds for environmentally sustainable public investments. In 2022, there were USD 487 billion of new green bond issuances, compared with USD 582 billion in 2021, of which new sovereign green bond issuances comprised USD 81 billion. The overwhelming majority of the market volume stems from Annex I Parties, particularly European Annex I Parties; of the 28 different issuers of sovereign green bonds, 12 are non-Annex I countries (CBI, 2023a). Sovereign bonds, including green bonds, rely on a functioning debt capital market and issuance can be restricted where the creditworthiness of State actors (CDKN, 2022).

435. National DFIs, regulators, central banks and ministries of finance across countries are also working to develop sustainable finance markets, seeking to realise greater levels of public and private investments for climate- and development related purposes. Exemplified by the dynamic landscape of sustainable finance and transition taxonomies, green and sustainability linked bonds or disclosure regulations in all world regions, such sustainable finance measures frequently entail explicit references to contributing to or being oriented on national climate ambitions, for example NDCs and/or NAPs, and international climate commitments, including in the context of the UNFCCC and the Paris Agreement (see chapter 1.6 above).

436. A large number of 99 developing countries have also established dedicated national banks, funds or other investment vehicles such as sovereign wealth funds to increase access to and the mobilization of public and private finance flows from domestic and international sources, according to the National Climate Funds Tracker.[124] PDBs play a particular role as public financial intermediaries with regional or national footprints to address the mismatch of private sector investment expectations and current risk-return profiles in developing countries and for providing technical expertise and capacities to domestic capital markets for climate and sustainability-related finance, as expressed in the recent Finance in Common Summit communique 2023.[125] In addition, examples such as the United Arab Emirates ALTERRA fund[126] (announced at COP28) show the emergence of blended public and private investment funds dedicated to financing the climate transition in emerging markets and developing economies, with the purpose of increasing the engagement of institutional investors and private FIs through financial structures whereby concessional and public capital is utilized to improve risk-adjusted returns for commercial investors.

437. MDBs, but also many bilateral DFIs and agencies from developed countries are also seeking to attract more public and private finance, in developing countries through financial, technical assistance or capacity-building support. This includes, for example, the Working

122) See https://www.imf.org/en/Blogs/Articles/2022/01/20/blog012022-a-new-trust-to-help-countries-build-resilience-and-sustainability and country examples such as Jamaica https://www.imf.org/en/News/Articles/2023/10/11/pr23346-jamaica-working-international-financial-institutions-following-rsf-arr-imf

123) For an overview see https://www.imf.org/en/Topics/climate-change.

124) Available at https://www.bu.edu/gdp/national-climate-funds-tracker/.

125) Available at https://financeincommon2023.com/final-communique/.

126) See https://www.alterra.ae/announcement/uae-commits-us30-billion-in-catalytic-capital-to-launch-landmark-climate-focused-investment-vehicle-at-cop28-copy.

Group on Sustainable Finance Taxonomy in Latin America and the Caribbean, which is supported by a consortium of UNEP and its Finance Initiative, the World Bank, IFC, IMF, UNDP, ECLAC, IDB, Capital Adequacy Framework, the Food and Agriculture Organization of the United Nations, the European Commission, the German Agency for International Cooperation global project with Brazil, India, Peru and Rwanda for promoting the global transformation towards more sustainable economic and financial systems, the GCF readiness programme and the GEF Aligning Finance Policies project,[127] or initiatives such as a United States training programme for other ministries of finance on climate resilience integration in macroeconomic and financial planning.[128]

438. Countries are also starting to cooperate internationally on trade rules to enhance the conditions for sustainable FDI for developing countries. In 2023 and 2024 the Investment Facilitation for Development Agreement was concluded by 123 countries, including 90 developing countries and 26 LDCs, in the format of WTO.[129] Among others, the Agreement recognizes the complementary relationship between investment and trade and the key role of FDI and trade in advancing development in the global economy, It further aims to increase the participation of developing countries in investment flows and recognizes the importance of international and domestic investment environments to facilitate FDIs. It also includes a dedicated section on sustainable investments, including responsible business conduct standards, due diligence and safeguards. In addition, international organisations are advancing work with governments, the private sector and civil society on aligning international investment treaties with the Paris Agreement and on supporting the shift from fossil fuel to renewable energy sources, in particular discussing options for refining investment protection standards to promote sustainable energy investments and revisit provisions for private investment protections and investor–State dispute settlements that could slow down progress on climate and transition pathways.[130]

Financial market regulation and policies

439. Chapter 1.6 above shows a growth in commitments by private actors to align their activities with the goal of the Paris Agreement, particularly financial sector actors, through climate risk disclosure, the adoption of net zero commitments and transition planning therein, and sustainable finance policies and principles. Action is also being observed in market operators in the context of scaling climate investments in developing countries

440. Both private sector corporations and FIs are increasingly adopting climate-related financial disclosures to report on climate risks and opportunities. Disclosure has seen a rapid rise since TCFD, under the Financial Stability Board, established voluntary disclosure guidelines and metrics (see e.g. TCFD, 2021a, 2021b). Connecting the many ongoing disclosure initiatives, the Net-Zero Data Public Utility launched a proof-of-concept version in December 2023 that aims to provide a publicly available global repository for private sector corporate climate data. A multi-stakeholder partnership, the Net-Zero Data Public Utility is designed to ensure public transparency, with the support of private industry bodies and non-profit organizations. The Net-Zero Data Public Utility pilot covers 382 corporates in 31 jurisdictions that have disclosed around 1.8 per cent of global direct emissions, yet the number of companies projected to disclose emissions and other climate-related data by 2030 is expected to reach more than 120,000 by 2030, which shows the rapidly evolving nature of voluntary and mandatory disclosure regimes in all world regions.

441. Net zero target-setting and portfolio alignment methods to align financial portfolios and activities over time have emerged in FIs and private sector actors. The Net Zero Tracker reports that of the 2,000 largest listed corporates worldwide, more than 1,000 have set net zero targets, a more than 40 per cent increase between June 2022 and November 2023.[131] The cumulative annual revenue of these firms with net zero targets is estimated at USD 27 trillion. As target-setting in corporate settings progresses, the quality and credibility of the targets remain questionable in many instances, with a low coverage of Scope 3 GHG emissions, a widespread use of carbon offsets and an absence of clear implementation plans, including actionable measures, and of progress reporting. The challenge of private measures and actions is not only assessing if real-world emission reductions are being delivered, but also if changes are happening in the allocation of capital both on balance sheets and at the portfolio level.

442. Third party target setting initiatives have emerged, such as SBTi, which focussed on banks and corporations,

127) https://www.greenfinanceplatform.org/initiatives/gef-aligning-finance-polices-0.
128) See https://www.unep.org/resources/report/common-framework-sustainable-finance-taxonomies-latin-america-and-caribbean, https://www.giz.de/en/worldwide/139587.html.
129) Available at https://www.wto.org/english/news_e/news24_e/infac_25feb24_e.htm.
130) See https://unctad.org/news/energy-transition-calls-faster-investment-treaty-reforms and https://one.oecd.org/document/DAF/INV/TR1/WD(2024)1/en/pdf.
131) https://zerotracker.net/analysis/new-analysis-half-of-worlds-largest-companies-are-committed-to-net-zero.

or TPI, which is focussed on asset owners and managers. The methods that have evolved in these and other initiatives towards target setting and alignment vary, however. Chapter 1 above outlines how they take on differing amounts of ambition, timelines, sectors, scope of emissions, and the degree to which adaptation and/or resilience is included. In parallel, there has been a growth in investor expectations around disclosure, target setting, achievement, and wider sustainability and climate criteria which has given rise to other initiatives that evaluate corporate performance, such as Climate Action 100+ which has coordinated institutional investors and driven investor engagement and accountability for corporate emissions. It is worth emphasizing, however, that the efforts of private actors do not always align with the countries' own understanding of and efforts towards achieving Article 2 of the Paris Agreement, including paragraph 1(c).

443. Some initiatives seeking harmonization across actors have developed guidance documents and target setting protocols for their member institutions to build into their policies. GFANZ is a strategic umbrella forum under which a number of net zero initiatives are positioned. These include NZAOA and NZBA for example, the latter of which adopted the United Nations Principles for Responsible Investment's Collective Commitment to Climate Action.

444. Initiatives seeking harmonization or agreement of certain policies and principles are often organized by actor or actor type. The Sustainable Finance and Banking Network focuses on regulatory and banking agencies in developing countries to advance country-level sustainable finance, with a focus on developing countries. It seeks to shift national financial systems toward improved ESG risk management and increased capital flows toward climate activities. The newer Forum for Insurance Transition to Net Zero, led and convened by the United Nations and the Net Zero Lawyers Alliance, both founded in 2023,[132] focus on the engagement of respective constituencies (insurers/reinsurers and law firms respectively) with other financial ecosystem stakeholders including insurance and financial regulators, (net zero) standard-setting bodies, corporates as well as the scientific, academic and civil society community, in order to advance frameworks for net zero or transition plans and metrics. For the NZLA, activities include a particular focus on legal barriers and challenges to enable Banks, Investors and Insurers to proactively address climate change including through cooperative action. Specific working groups focus on a) issues of antitrust and competition law, b) project finance to simplify and expedite transition-related financing, c) fiduciary duties to adequately incorporate the value of climate related risks and opportunities into fiduciary duty frameworks of FIs, as well as d) on international trade to consider how international trade law can better align with the UNFCCC and the goals of the Paris Agreement, looking for example at carbon markets, procurement and clean energy projects.

445. In moving from long-term climate commitment and target setting to mid- and near-term implementation by private sector FIs, mapping identifies the incorporation of dedicated climate solutions or investment targets as well as the emerging application of energy financing ratios, to track and guide investments. Climate investment targets and transparency thereof form part of private sector alliance protocols, transition plan guidance and feature in disclosure frameworks (see section 1.6). In addition, the concept of clean energy to fossil fuel financing ratio has been utilized since 2023 in global market analyses by the IEA and BNEF, finding that ratio of clean energy to fossil fuel investments is increasing, albeit at a much slower pace than what is needed for 1.5C scenarios (BNEF, 2023b; IEA, 2023e).[133] Subsequently, some private FIs announced in 2024 the adoption and disclosure of their clean energy financing ratio as part of their climate transition[134].

446. Transition planning for corporates and financial institutions is receiving increasing attention seeking to ensure real-economy impact for emissions reductions or climate resilience as a result of target setting and efforts towards portfolio alignment. These are, so far, largely focussed on the assessment of absolute and intensity-based financed emissions (Scope 3 GHG emissions). Recently, avoided or removed emissions approaches are proposed that estimate the induced and avoided emissions at asset or company-level compared to a counterfactual baseline to provide an indication of the real-economy impact of financing or investment. Other common approaches to ensure real-economy impact beyond emissions accounting and reporting are: stewardship and engagement measures and targets of FIs to proactively engage with high-emitting counterparties;

132) See https://www.unepfi.org/forum-for-insurance-transition-to-net-zero/ and https://www.netzerolawyers.com/.

133) The IEA recorded a clean energy to fossil fuel investment ratio of 1.8:1 in 2023 and BNEF estimated an energy supply investment and banking ratio (ESIR and ESBR) of around 1:1 and 0.73:1 respectively. The ratio of investment in low-carbon energy as compared to unabated fossil fuels that would be required in 1.5C scenarios is estimated to attain at a minimum 4:1 and up to 10-11:1 by 2030 according to the two sources.

134) See https://about.bnef.com/blog/citi-jpmorgan-first-adopters-of-energy-finance-ratio/#:~:text=BNEF%20estimates%20that%20JPMorgan%20facilitated,Citigroup's%20ratio%20at%200.6%3A1.

policy engagement measures and targets of FIs to engage with policy makers at the national, regional and international level for ambitious climate policies and enabling frameworks for climate-consistent investments; and, impact measurement frameworks to integrate non-financial impact indicators (climate-, environmental-, social- or governance- related) into financial decision-making and reporting.

447. Chapter 1 identifies at least 14 private sector and non-governmental actors or initiatives have provided guidance and assessments for the design and credibility of transition finance and plans. Transition plans often complement commitments such as net zero targets, by taking a more whole of economy approach that advances governance and social safeguards, while encouraging engagement rather than divestment, potentially facilitating a smoother transition. Further, inherent in the emerging understanding of transition finance is the recognition that transitions will differ across sectors and geographies and in timelines for pathways (ASEAN Capital Markets Forum, 2023; NGFS, 2022b). This is visible not only in emerging markets and private sector approaches such as by GFANZ and ICMA but also in developed country definitions of transition finance such as by the EU Commission[135]. Ministries of finance around the world also acknowledge that driving forward a just transition presents a fundamental cross-cutting issue throughout the climate transition, in order to sustain public support, distribute benefits fairly within societies and mitigate social costs (CFMCA, 2023). Without widely or internationally agreed standards for credible green finance, concerns of greenwashing remain real and resilience missing (RMI, 2023; OECD, 2023d). Concerns have also been raised that transition finance opens the door to increase or continue to finance high-emitting assets (ICMA, 2024; NGFS, 2022b). Lastly, while reporting of transition plans by private sector actors is increasingly referenced or mandated in disclosure frameworks, most frameworks do not entail a clear requirement for specific climate-transitions and actions of these actors, beyond mere reporting whether a transition plan exists and what it entails.

448. Referred to in the fourth BA as market operators, institutions such as stock exchanges facilitate financial transitions. In doing so, they can make use of processes such as listing rules and disclosure mandates to encourage or discourage behaviours. The Sustainable Stock Exchange initiative seeks to enhance ESG performance via stock exchanges and securities market regulators, while FC4S is an international network launched to clarify how financial centres can contributed to the SDGs and the Paris Agreement. Differing in institutional structure, mandates and size, the FC4S is largely comprised of public—private partnerships between industry and government in particular geographies.

449. Investment-grade credit ratings are a fundamental determinant of access to capital, for countries and other public and private sector actors. Credit rating agencies play a central role in global financial markets in providing assessments of creditworthiness of sovereigns and corporates that are used by investors, banks and supervisors in their internal financial decision-making and capital allocation processes. Cross-cutting ESG scores have been developed by all major credit rating agencies, yet dedicated methodologies for integrating climate change related transition and physical risks as fundamental components of credit ratings are not mainstreamed across all asset classes in current credit rating agency practices.[136] While climate components are part of ESG scores (mostly on scales of one to five), the backward or short-term forward-looking nature of traditional rating assessments have been noted to be incompatible with the medium- to long-term impacts of the climate transition, including regarding the investment outlook for energy systems and high- and low-emission technologies, and future physical climate risks (NGFS, 2022a).

450. Work is progressing at the three main credit rating agencies. Moody's, S&P and Fitch have in recent years explored approaches or conducted analyses for forward-looking methodologies to assess the future impact of climate change and the transition on ratings of corporates or countries. These included analysing the credit implications of just transitions for sovereigns, corporates and for infrastructure climate scenario analyses up to 2050, and climate change vulnerability and readiness analyses of countries over a 30-year time horizon.[137] The outcomes of all three exercises suggest

135) "Finance for the transition to a climate-neutral and sustainable economy is needed today for those undertakings that want to become sustainable but cannot shift in one step to a fully environment-friendly, climate-neutral performance model. Transition finance will be necessary over the coming years to ensure a timely and orderly transition of the real economy towards sustainability while ensuring the competitiveness of the EU economy. Not all technologies are yet available for a sustainable economy and economic actors can reach these objectives at different pace. In EU COM. 2023. Commission Recommendation (EU) 2023/1425 of 27 June 2023 on facilitating finance for the transition to a sustainable economy, p. 1. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023H1425.

136) https://ieefa.org/resources/more-credit-downgrades-imminent-under-climate-change-credit-model-overhaul-yet-be-seen;

137) https://www.fitchratings.com/research/corporate-finance/climate-risk-related-downgrade-may-affect-20-of-global-corporates-by-2035-08-03-2023; S&P Global (2022) Weather Warning: Assessing Countries' Vulnerability To Economic Losses From Physical Climate Risks. https://www.spglobal.com/_assets/documents/ratings/research/101529900.pdf; Moody's Investors Service (2022) Just Transition: Are emerging market entities prepared to manage the social implications of global decarbonization? https://www.moodys.com/sites/products/ProductAttachments/Moody's%20Just%20Transition%20 Report.pdf.

that climate change is expected to become more material in future rating practices, including for transition risks (Fitch, Moody's) and for physical climate risk exposure (S&P, Fitch). At present, credit rating agencies include information on extreme weather events or other physical risk indicators in their composite ESG ratings and use different indicators related to revenues and dependencies on fossil fuels and economic diversification for assessing transition risks. More specifically, Moody's has established a dedicated carbon transition assessment with its ESG rating and a recent Fitch proposal is to incorporate the Forecast Policy Scenario of the United Nations Principles for Responsible Investment to better assess climate transition outlooks (Monnin et al., 2024).

451. A recent IMF working paper (Gratcheva and O'Reilly, 2024) explored the relatively nascent sovereign ESG investment landscape, which has gained prominence only over the past five years to help private sector actors guide their capital allocation according to the environmental, social and governance aspects of sovereign borrowers (countries). The review found more homogenous results among existing sovereign ESG scores or indices (i.e. the different indices reveal more similar results for the same countries, as is the case for corporate ESG scores). However, it also found two concerns in current practices: first, an ingrained income bias in existing ESG scores, whereby high-income countries tend to be assigned higher ESG scores, and only two sovereign ESG methodologies employed income-adjusted scoring that led to more beneficial assessments for low- and middle-income countries; second, a focus of sovereign ESG scores on sustainability risks that can affect financial returns rather than on advancing positive sustainability outcomes, such as identifying where investments have the greatest impact potential.

452. Acknowledging the existing large investment gaps for climate action in developing countries, many private sector financial initiatives and networks, including GFANZ and its sub-alliances or the Insurance Development Forum, have set up dedicated workstreams in the past years to identify and address systemic barriers and bottlenecks that impede mobilization of finance flows towards developing countries, including for adaptation and resilience. Private sector engagement is also visible in collaboration formats with public MDBs and DFIs, for example on country platforms, the World Bank private sector investment laboratory or the COP 28 Call for Collaboration: Enhancing the Enabling Environment to Accelerate the Mobilization of Private Finance for Adaptation and Resilience[138]. Some common elements of such work include:

- Working with financial regulators and MDBs on new models for public-private risk-sharing models;
- Fostering the use of liquid and tradable assets to increase the participation of institutional investors;
- Developing suitable investment structures for developing country markets, including through the use of blended finance and public guarantees;
- Dedicated transition finance and coal- phase-out approaches;
- Enhancing data- and information-sharing for climate and financial risks in developing countries;
- Solutions to the lower costs of capital and foreign exchange risks.

453. In addition, private sector initiatives continue to call on countries and the international community for the improvement of enabling environments for investments in developing countries, as could be seen in the submissions to the global stocktake and in the run-up to COP 28.[139] Specific asks include improving macro-economic fundamentals, legal and regulatory predictability, overarching political commitments and signalling by governments for ambitious climate policies, including through NDCs, as well as the development of climate investment plans and investable project pipelines.

4.4.3. Public finance system initiatives relevant for implementing Article 2, paragraph 1(c), of the Paris Agreement

Domestic focus

454. Public finance initiatives that work towards the goal of Article 2, paragraph 1(c), of the Paris Agreement, including public finance actors, regulators and financial centres from all world regions, have continued to expand their broad geographical scope. The country representation of five such initiatives (CFMCA, NGFS, the Sustainable Finance and Banking Network, the Sustainable Stock Exchanges Initiative and FC4S) is shown in figure 4.2. Since the fifth BA, each of the five initiatives has increased its membership. NGFS grew from 116 to 131 members, including new member institutions from 15 countries in Africa (five), Asia (six),

138) See https://www.worldbank.org/en/news/press-release/2023/07/10/ceos-and-chairs-to-join-private-sector-investment-lab and https://onebillionresilient.org/cop28-call-for-collaboration/.

139) See GST Information Portal: https://unfccc.int/topics/global-stocktake/information-portal, https://assets.bbhub.io/company/sites/63/2023/11/GFANZ-2023-Progress-Report.pdf, or also the Call for Collaboration.

Latin America and the Caribbean (two) and Europe (two), for a total representation of 96 host countries. CFMCA increased its membership from 68 to 91 national finance ministries, with the addition of new countries from all world regions: Africa (10), Asia (five), Europe (four), Latin America (three) and Oceania (one). A total of 14 additional institutions joined the Sustainable Finance and Banking Network (five of those from new countries), taking the total membership to 86 institutions and the country coverage to 56. The Sustainable Stock Exchanges Initiative increased its wide range of partner institutions from 104 to 129, with institutions from 10 new countries joining, for a total of 101 countries represented. The FC4S increased its membership by three financial centres, to 42, including New Zealand as an additional host country, for a total of 31 different host countries with participating financial centres.

455. Figure 4.2 shows that each of the initiatives has global coverage in representation and total country representation increased from 136 in 2022 to 151 countries represented across all initiatives as beginning of 2024. Seven developing countries, Brazil, Egypt, Kazakhstan, Kenya, Mexico, Morocco and Nigeria participate in all five initiatives, while 13 European, North American and Oceanian countries participate in all initiatives available to them (the Sustainable Finance and Banking Network is a dedicated initiative for financial sector actors in emerging markets).

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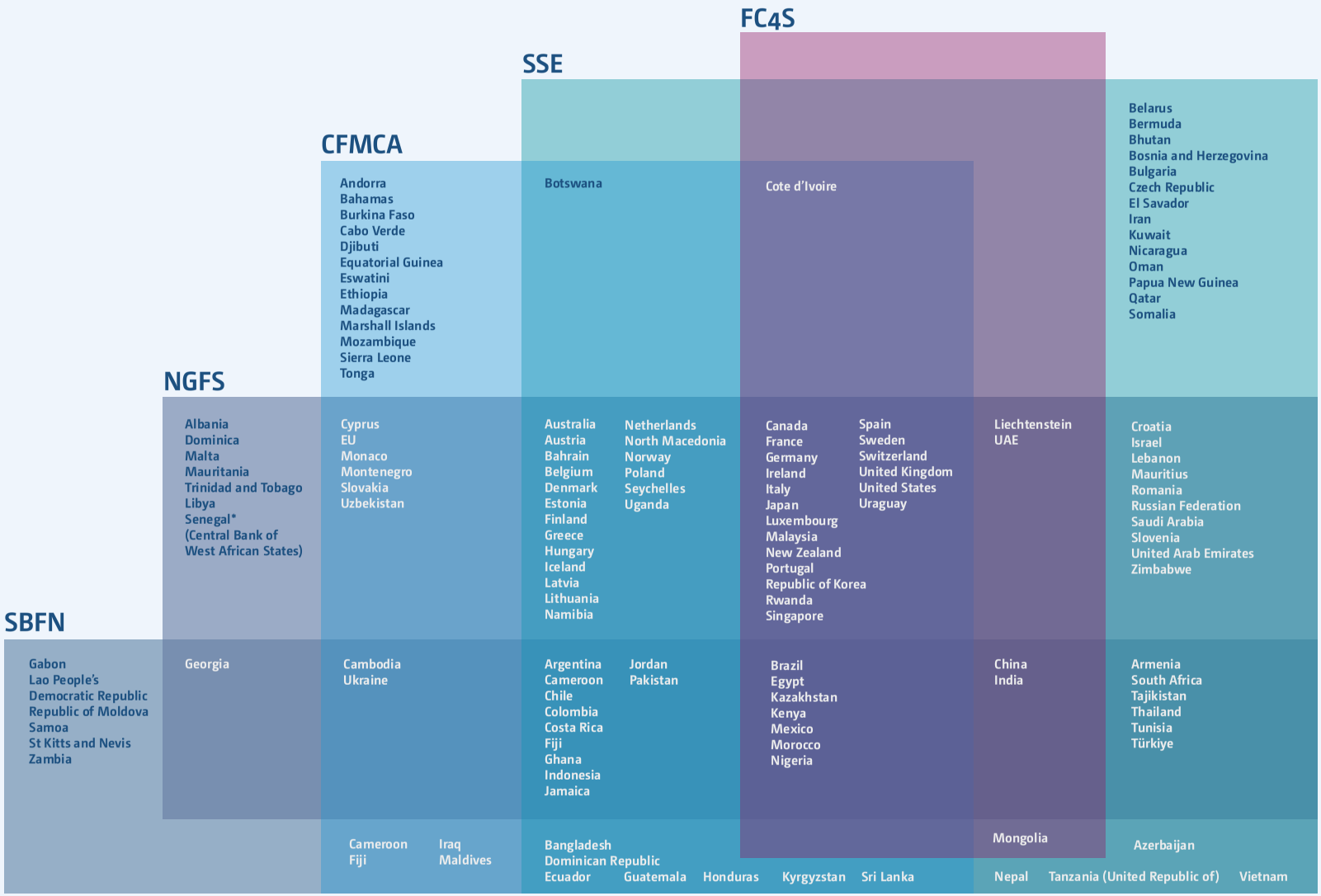
Figure 4.3

Country representation overlaps of five public sustainable finance initiatives, as at February 2024



Note: Based on a review of membership pages of each initiative's website

456. Often in the context of the implementation of Article 2, paragraph 1(c), of the Paris Agreement whole-of-government approaches have been proposed. This implies coordinating action across ministries and other public entities and taking into account financial, socioeconomic and local-level implications. A coordinating role for the ministries of finance has also been noted in the Sharm el-Sheikh dialogues (FCCC/PA/CMA/2023/7/Rev.1, para. 39). Equally, it is acknowledged that approaches to implementing article 2, paragraph 1(c) of the Paris Agreement benefit from the active participation of subnational and local public and private actors, including regional and municipal authorities, civil society organizations, NGOs, Indigenous communities, women, youth and the elderly (FCCC/PA/CMA/2023/7/Rev.1, para 43).

457. A number of countries have engaged in planning processes around the financing of sustainable and/or climate action. The climate prosperity plans, for example, are a framework developed by V20 countries to address the problem of mobilizing sufficient domestic and international finance for climate action, through the development of country-specific national investment plans for socioeconomic and climate outcomes. Similar to private sector types of transition planning, the plans entail three dimensions of defining national climate and development objectives and scenarios, identifying programmes and projects for implementation and clear financing options and road maps, and addressing the legislative and regulatory environment to support their achievement. At present, the climate prosperity plans of Bangladesh, Ghana and Sri Lanka have been published, which identify the available fiscal tools and government revenues under different climate and development scenarios, as well as concrete policy measures, investment projects and associated timelines for implementation.[140] A key purpose of the formulation of climate prosperity plans is to facilitate the engagement of V20 countries with implementing and financing partners from the public, private and philanthropic sector at the international level and to foster the mainstreaming of climate-consistent development into national planning.

International focus

458. Internationally coordinated action is considered to be a key element for a coherent and systemic response to making finance flows consistent with climate outcomes, given the interconnectedness of global financial markets. The IPCC WG3 chapter on finance and investments concluded with high confidence that "near-term actions to shift the financial system over the next decade are critically important and possible with globally coordinated efforts. Taking into account the inertia of the financial system as well as the magnitude of the challenge to align financial flows with the long-term global goals, fast action is required to ensure the readiness of the financial sector as an enabler of the transition" (Kreibiehl et al., 2022).

459. Various multilateral public finance and governmental initiatives have been established in recent years to shift or reform the international financial system towards more sustainable, climate-compatible and equitable outcomes. The scope and focus areas, format and composition of the actors of these initiatives vary, and some governments or non-State actors are involved in several initiatives. Table 4.1 provides a non-exhaustive listing and overview of climate-relevant international public finance initiatives, with a focus on international coordination or financial system reform.

460. Many multilateral initiatives for international financial system reform or evolution are not climate-specific but formulate a standpoint that the existing financial system and flows of finance do not consistently support, or could do more to support, sustainable low-emissions and climate-resilient development across all world regions. A common pillar among initiatives is reforming or evolving the MDB system to increase the available concessional capital for sustainable development purposes and address global challenges. In reaction to shareholder and stakeholder calls in 2023, the World Bank Group published an evolution road map and updated its mission statement to focus on sustainability, resilience and inclusiveness in the pursuit of its core goals of ending poverty and promoting shared prosperity. The Heads of MBD Group further announced steps in April 2024 to "deepen collaboration to deliver as a system" and increase the impact and scale of their operations to tackle development challenges, including scaling up general financing capacities and joint action on climate change.[141] The role of MDB reform or evolution and access to public concessional finance is prominent among initiatives that seek to address the high debt burden among developing countries, as about 60 per cent of low-income countries are at high risk of or already at debt distress (World Bank, 2023b). Solutions proposed by multilateral initiatives and fora include among others, comprehensive debt relief and debt

140) For more information see https://www.v-20.org/climate-prosperity-plans
141) https://www.iadb.org/en/news/multilateral-development-banks-deepen-collaboration-deliver-system.

restructuring, the rechannelling or allocation of SDRs to developing countries or through MDB accounts (the AfDB pioneered the use of SDRs in 2023), debt-for-nature/climate swaps and increasing capacities for domestic resource mobilization and taxation including combatting tax avoidance and illicit flows.

461. In response to the COVID-19 pandemic, since 2020, emergency debt rescheduling initiatives have been established. These have notably been driven by the G20 and Paris Club of Creditors, including the Debt-service Suspension Initiative, which ended in 2022, and the G20 Common Framework beyond the DSSI, which seeks to target debt restructurings (rather than temporary relief). Progress under the Common Framework has been slow with lengthy negotiations between diverse creditors and competing claims. Of the four countries that applied (Chad, Ethiopia, Ghana and Zambia), only two have reached conclusion (Chad and Zambia). In April 2024, the Global Sovereign Debt Roundtable was launched to advance debt restructuring processes for low- and middle-income countries. The format includes major creditor and debtor countries and private sector representatives, chaired by IMF, World Bank and India in its former role asG20 presidency. An important component is its purpose to develop a greater common understanding by stakeholders on principles for the comparable treatment of private sector claims in order to support comprehensive debt relief that would include both public and private creditors (IMF, 2023b).

462. Debt for climate swaps have received increased attention as a form of restructuring of existing debt. Since 2015, more than 10 transactions have been registered or are under negotiation. Debt for climate and nature are financing structures whereby a creditor allows the debt to be reduced, either by conversion to a local currency and/or paid at a lower interest rate or some form of debt write-off, given that the money saved is used to invest in poverty-reducing climate resilience, climate emission mitigation or biodiversity protection initiatives (Steele and Patel, 2020). Three types of debt swaps have been distinguished, which involve varying stakeholders on the creditor side: bilateral, commercial and multilateral debt swaps (Steele and Patel, 2020). Three types of debt swaps have been distinguished, that involve varying stakeholders on the creditor side: i) bilateral, commercial and multilateral debt swaps (Spencer-Henry 2022). Germany has undertaken a number of bilateral debt-for-climate swaps, including for coastal protection and renewable energy infrastructure;[142] Climate Funds Managers and Credit Suisse structured Ecuador's debt swap;[143] while EIB and IDB recently agreed a debt-swap in Barbados.[144] Debt swaps have been in existence since the 1980s and often remain small and have high transaction costs and uncertain private sector creditor interest. They are often considered a complement to existing climate finance instruments in countries with sustainable debts but limited fiscal space, rather than in countries in debt distress (Volz et al., 2022; IMF, 2022).[145]

463. Initiatives and international organizations have also commenced exploratory work and deliberations on new forms of global taxation and innovative sources for the benefit of sustainable development and climate goals. Various formats discuss proposals for maritime levies (International Maritime Organization), aviation (International Civil Aviation Organization Carbon Offsetting and Reduction Scheme for International Aviation) and global carbon pricing schemes (Bridgetown Initiative, V20, Global Solidarity Levies Taskforce, OECD, United Nations SDG proposal), as well as options for global wealth or financial transaction taxes. The high levels of required international coordination across countries, and potential negative effects on international trade and distributional effects across and within countries, economic sectors and citizens, are some of the key aspects that are considered in addition to the revenue-generating potentials of such proposals.

464. Common to many of the below reviewed international declarations, initiatives and formats is the acknowledgement of the need to shift away from or phase out fossil fuel related financing, including subsidies, within the scope of making finance flows consistent with the goals of the Paris Agreement and to achieve sustainable development outcomes. Initiatives such as the Clean Energy Transition Partnership or the OECD DAC declaration of ending public international support for fossil fuels focus on public sector and development finances related to fossil fuels, and other formats such as within the V20 or the Nairobi Declaration on Climate Change and Call to Action, put emphasis on the just and equitable aspects of shifting

142) https://www.bmz.de/en/issues/climate-change-and-development/climate-financing/debt-for-climate-swaps-195550#:~:text=In%20a%20debt%2Dfor%2Dclimate,an%20established%20bilateral%20swap%20programme.

143) https://www.climatechangenews.com/2023/05/10/ecuador-gets-cheap-debt-write-off-with-promise-to-protect-galapagoss-nature/#:~:text=Ecuador%20gets%20cheap%20debt%20write%2Doff%20with%20promise%20to%20protect%20Galapagos's%20nature,-Published%20on%2010&text=Ecuador%20sealed%20the%20world's%20largest,the%20world's%20most%20precious%20ecosystems.

144) https://www.reuters.com/sustainability/sustainable-finance-reporting/barbados-debt-for-climate-swap-backed-by-300-mln-eib-iadb-guarantee-statement-2023-11-10/.

145) https://www.imf.org/en/Publications/WP/Issues/2022/08/11/Debt-for-Climate-Swaps-Analysis-Design-and-Implementation-522184.

away from such financing, in a context-specific manner and with the provision of adequate support measures. International organizations and coordination networks equally underline the fundamental aspect of assessing the risks and addressing flows for emissions-intensive or maladaptive activities, in order to arrive at climate-consistent finance flows (UNCTAD, 2023a; CFMCA, 2023)[146]. While the supervisory lens is particularly concerned with the transparency and assessment of inconsistent flows within the public and private sector, ministries of finance exchange views and best practices on reducing fossil fuel related subsidies and incentives and inconsistent investments, in accordance with their national circumstances while ensuring social protection, energy access and just transitions.

465. The climatic impacts on global trade and associated financial flows, as well as the application and cross-border effects of trade-related measures to achieve climate outcomes are another focus point of international discussions both within and outside the UNFCCC process, as summarized in chapter 4.2.3 above. Initiatives led by developing countries, including the Bridgetown Initiative, Nairobi Declaration on Climate Change and Call to Action and Africa Green Industrialization initiative, and international organizations including WTO, UNCTAD and IMF, underline the global macroeconomic benefits of open trade, in particular for sustainable development in developing countries, and some quantitative and qualitative studies have been conducted on the macro-economic effects and GDP impacts of climate-related trade measures and industrial policies (Mott, Razo, and Hamwey, 2021; Gründler et al., 2023; De Nederlandsche Bank NV, 2023). At the same time, experiences with green industrial policies and carbon pricing systems at the regional, national or sub-national level show encouraging signs of achieving emissions reductions and increased green investments in targeted economic sectors through market-based mechanisms.

146) See also NGFS secretariat submission to the SCF in 2023.

Table 4.1

Non-exhaustive overview of international public finance initiatives and fora relevant to financing climate action and international financial system architecture

Initiative/forum	Climate-specific	MDB reform	Sustainable development and fiscal space (including debt)	Taxation/ innovative sources[a]	Shift or phase out flows	Trade
Bridgetown Initiative		X	X	X		X
Nairobi Declaration on Climate Change and Call to Action	X	X	X		X	X
Africa Green Industrialization Initiative / Africa Green Investment Initiative	X					X
Accra-Marrakech Agenda (V20)		X	X	X	X	
SDG Stimulus		X	X	X		
Summit for a New Global Financing Pact		X	X	X		
Global Solidarity Levies Task Force				X		
Clean Energy Transition Partnership/ Statement on International Public Support for the Clean Energy Transition					X	X
G20 Common Framework for Debt Treatment / Debt Service Suspension Initiative			X			
G20 Capital Adequacy Framework Review		X				
G20 Taskforce for the Global Mobilization against Climate Change	X		X			
Global Sovereign Debt Roundtable			X			
Paris Club			X			
NGFS		X			X	
Coalition of Finance Ministers for Climate Action	X	X	X		X	
Finance in Common Summit		X				
OECD (through several subforums and workstreams)				X	X	X
International Civil Aviation Organization Carbon Offsetting and Reduction Scheme for International Aviation				X		
International Maritime Organization (maritime levies and carbon pricing)				X		
WTO						X
UNCTAD		X	X	X	X	X

Source: technical authors' literature review

a. Taxation includes carbon pricing

466. The Coalition of Finance Ministers for Climate Action and the NGFS are two international coordination forums that support capacity-building and the development of approaches and methodologies for climate compatible financial systems in their respective constituencies of ministries of finance and central banks and financial supervisors. Through their convening role in exchanging information across countries and jurisdictions they also serve to raise awareness of climate action among public financial and regulatory actors and to enhance the understanding of different approaches to the implementation of Article 2, paragraph 1(c), of the Paris Agreement, including for tracking progress, by governments and private finance actors. Some examples of the multidimensionality of the work under these two forums are the Coalition report Strengthening the Role of Finance Ministers in Driving Climate Action, a Framework and Guide for Ministers and Ministries of Finance,[147] which includes more than 140 case studies and formulates guidance for the climate alignment of public financial, fiscal and macroeconomic frameworks, and workshops and reports to support the active engagement of ministries of finance in the design and financing of NDCs and LT-LEDS, including through assessing the feasibility of actions, aligning financial and economic frameworks to incentivize climate actions, and developing investment plans or identifying public and private, domestic and international financing for required actions(CFMCA, 2023). NGFS activities include, among others, research publications on transition planning, the development of the NGFS suite of climate models for the transition and physical risk assessment in the financial sector, and exchanges on best practices for climate-related supervisory tools and stress testing at the macro- and micro-prudential level.[148] A joint IMF–World Bank domestic resource mobilization initiative seeks to enhance and integrate the capacity development provided by the institutions, complementing existing support, in order to support the funding of the SDGs and the climate transition through a country-led approach in line with national strategies and goals[149].

467. Public DFIs, much like private finance institutions, are devising their own methods to assess, implement and track efforts that might be considered to be consistent with the Paris Agreement. Bilateral agencies allocate national finance flows towards climate action, including through development cooperation. As noted in chapter 3.4 above, around 33 percent of bilateral allocable ODA is considered climate-relevant, but it remains unclear the degree to which the remaining 66 per cent supports, or potentially runs counter to, low-emission, climate-resilient development. The fourth (2020) BA identified an emergence of bilateral agencies that seek climate alignment of development finance, which have consolidated and expanded since. The SCF mapping in 2022 outlined these, further highlighting the OECD DAC commitment to the Paris alignment of aid at COP 26.[150]

468. A number of national and regional DFIs have adopted Paris alignment approaches, which particularly focus on reducing emissions, often with exclusion lists of selected GHG-intensive activities and other environmental screening activities in order to do no harm (FICS, 2023; IDFC, 2023c). The first, internal, dimension is entity- or institutional-level alignment of PDB financing policies, strategies, vision and governance, and the second, external, dimension focuses on operational alignment of finance, including by ensuring geographic contextualization of investments and anchoring finance in national or local road maps and by deploying ex ante and ex post SDG impact assessment and monitoring tools for all financing activities, including the do no significant harm principle, and recognizing the multidimensionality of the SDGs. A third dimension is external stakeholder mobilization and engagement with public and private financial sector actors to enhance common approaches for SDG alignment at the institutional and transaction level. Engagement is also proposed with national, regional and international authorities to strengthen PDB mandates and supervisory guidelines, with a view to fostering sustainable finance opportunities, technical assistance and capacity-building, to enhancing the capital availability of PDBs and to increasing their ability to mobilize private and innovative finance. A Finance in Common Summit working group has been set up to advance methodologies and approaches further.

469. Multilateral climate funds, through their mandate to fund climate action and channel public concessional finance to developing countries, also assume a role as catalysts for green market transformations and greater flows of climate finance from their networks of international and domestic public and private sector partners (GCF 2023, CIF 2024). At COP 28, the heads of the AF, CIF, GCF and GEF issued a joint declaration on

147) Available at https://www.financeministersforclimate.org/sites/cape/files/inline-files/Strengthening%20the%20role%20of%20Ministries%20of%20Finance%20in%20driving%20action%20FULL%20REPORT.pdf
148) Available at https://www.ngfs.net/en.
149) Available at https://www.imf.org/-/media/Files/Research/imf-and-g20/2024/domestic-resource-mobilization.ashx
150) FCCC/CP/2022/8/Add.4–FCCC/PA/CMA/2022/7/Add.4

enhancing access to climate finance and increasing its impact which highlighted the role of multilateral climate funds in contributing to the reform of the international climate finance architecture, including by working with MDBs, mitigating investment risks and lowering financing costs. It also noted that, next to international climate finance goals, "it is essential to align global financial flows with the 1.5 °C goal of the Paris Agreement which will require moving from billions to trillions".[151] For supporting low-emission, and climate-resilient pathways in partner countries, the GCF has identified four guiding transformative stages along the climate investment cycle, covering enabling environments for climate action, de-risking of investments to mobilize finance at scale, accelerating climate innovation and greening the financial sector (GCF, 2023a). An exemplary project is the Tanzania Agriculture Climate Adaptation Technology Deployment Programme, in which the GCF supports national banks in developing domestic loan programmes and climate insurance markets for the benefit of small-holder agriculture and small and medium-sized enterprises, through the use of concessional loans, guarantees and grants[152].

470. The MDBs have continued to develop their PAA, committed to in 2019. The MDB's PAA methodology explicitly addresses the national and global dimensions of reaching climate goals by assessing the compatibility of investments with national NDCs and consistency with broader economic, sectoral or regional pathways for global mitigation goals. In addition, the MDB's operationalization of the concept of alignment is considered to be of a different, and broader scope, to the climate-resilient pathway, rather than assessing whether it provides an active contribution to climate change mitigation or adaptation. Exemplary cases are sustainable investments in the health or education sectors that may not be considered under the climate finance tracking methodology (see chapter 1.6 above). As such, the MDB PAA constitutes a wider safeguard or screening-out process to ensure that all MDB financing is consistent with the Paris Agreement goals, rather than a narrower screening-in process conducted through the positive list under the climate finance mitigation methodology.

471. The international development system has grown in size over the past decade, but financial assistance and support volumes have not increased in proportion to global economic growth and the investment needs for sustainable development (UN DESA, 2024). In response to calls for an enhanced international financing system (see Chapter 1.4.3 below below), MDBs, individually or collectively, announced in 2023 and 2024 a range of initiatives and measures to make further concessional capital available and mobilize private sector finance more efficiently. Some of these actions include the ambition to create an additional lending headroom of USD 300 – 400 billion over the next decade, including by implementing the recommendations of the G20 Capital Adequacy Framework review; exploring the channelling of SDRs and making use of hybrid and callable capital instruments to increase the capital base of MDBs; strengthening country-level collaboration, co-financing and country platform models; supporting further actions on adaptation and disaster risk management including the Early Warnings for All initiative; collaborative work on strengthened and harmonized impact and result measurements for climate-related interventions; and various initiatives to mobilize more private sector financing, including the World Bank private sector laboratory, scaling up local currency and foreign exchange hedging solutions and making financial and climate-related information on developing country markets in the Global Emerging Market Risk database available to private sector actors.[153]

4.4.4. Private finance initiatives

472. Private finance initiatives cover asset owners, asset managers, investors, and banking and insurance companies. Private sector initiatives and alliances, such as the Race to Zero, backed by the United Nations, and the Race to Resilience, under the GFANZ umbrella, with support from the UNEP Finance Initiative and the United Nations Principles for Responsible Banking/Investing, have played a central role as convening platforms for individual investors and banking and insurance companies to build capacities and develop approaches to climate commitments, targets and methodologies for implementation.

473. Figure 4.3 shows the large financial volumes that members of private finance initiatives relevant to Article 2, paragraph 1(c), of the Paris Agreement manage or control, which range in the trillions of United States dollars. While the size of these initiatives grew considerably between 2020 and 2022 (see SCF, 2022b), growth has slowed in recent years, mainly because

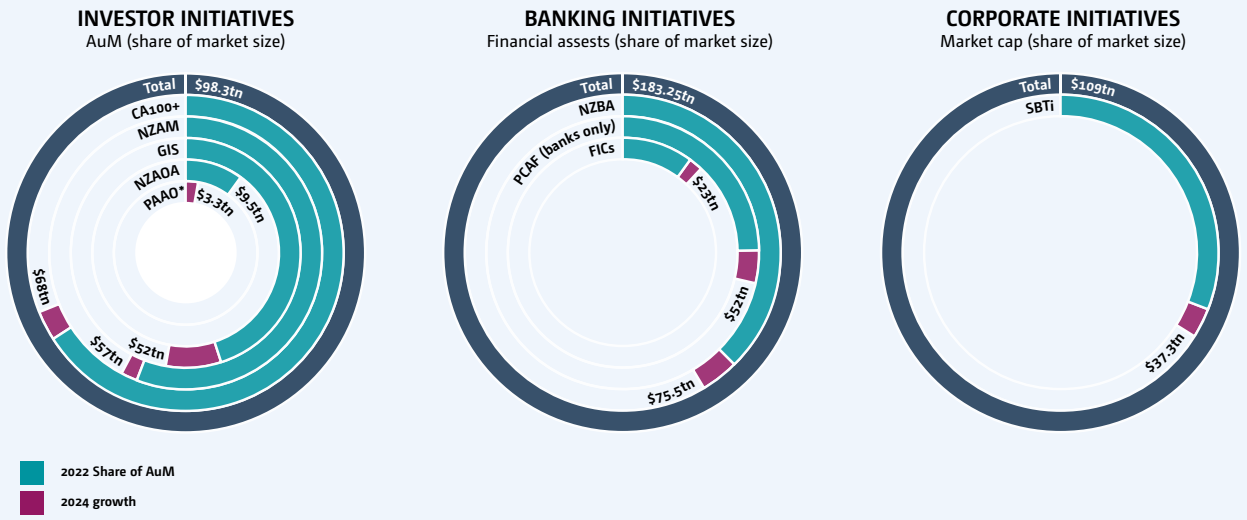
151) Available at https://www.thegef.org/newsroom/news/enhancing-access-and-increasing-impact-role-multilateral-climate-funds .

152) https://www.greenclimate.fund/project/fp179

153) See https://www.eib.org/attachments/press/cop28-joint-mdb-statement.pdf, and https://www.worldbank.org/en/news/statement/2024/04/20/multilateral-development-banks-deepen-collaboration-to-deliver-as-a-system for an overview of actions and priorities for further work.

Figure 4.4

Scale of financial sector initiatives related to sustainability or climate action.



Source: Boston Consulting Group, (2023); Financial Stability Board, (2023); SIFMA, (2023); a review of each organization's website.

initiatives have seen a marginal increase, or even a decrease in member institutions, but also because the financial market size contracted, with a corresponding downward effect on assets under management and balance sheets.

474. Among investor initiatives, the assets under management of NZAOA and NZAM as at the beginning of 2024 decreased by USD 0.9 trillion and USD 0.5 trillion respectively, as the total size of the global asset management market contracted between 2022 and 2024. Their memberships remain large, at 86 and 315 institutions respectively.

475. The Net Zero Insurance Initiative did not provide information on the assets under management of its members; however, over the course of 2022 and 2023 it saw a significant decrease in membership, down to 11 institutions, as at least 18 insurance companies exited the initiative, facing legal concerns about anti-trust regulations in the United States and in Europe.[154] Climate Action 100+ remains a large initiative, with more than 700 investors supporting engagement for climate-related disclosure and action by 170 of the most emission-intensive companies globally. The latest information on assets under management (USD 68 trillion) dates back to 2022, and is likely to have decreased in 2024 as some large institutional investors, such as JP Morgan Asset Management, State Street Global Advisors, Invesco and PIMCO, exited the initiative, pointing to their independent capacities and approaches to engaging with clients.[155] In June 2023, Climate Action 100+ entered phase two of its strategy, complementing its initial focus on enhancing climate risk and emission disclosure by asking corporates to implement actions that address these climate-related risks, including through corporate transition plans.[156] Since the launch of phase two, 60 new members have joined the initiative.[157]

476. The main alliance in the banking sector, NZBA, saw an increase in its membership, to 136 institutions, and a USD 7.5 trillion increase in cumulative financial assets. In addition, more banks became signatories to the PCAF reference methodology for carbon accounting, reaching 458 institutions with USD 52 trillion of financial assets as at January 2024. Regarding corporate initiatives, SBTi registered a market capitalization of companies with science-based targets or commitments of USD 37

154) See https://insuranceinvestor.com/articles/third-company-pulls-out-of-net-zero-insurance-alliance/.
155) https://esgclarity.com/investor-disappointment-as-jpmam-and-state-street-exit-ca100/.
156) Available at https://www.climateaction100.org/wp-content/uploads/2023/06/CA100-Phase-2-Summary-of-Changes.pdf.
157) Available at https://www.climateaction100.org/news/climate-action-100-reaction-to-recent-departures/.

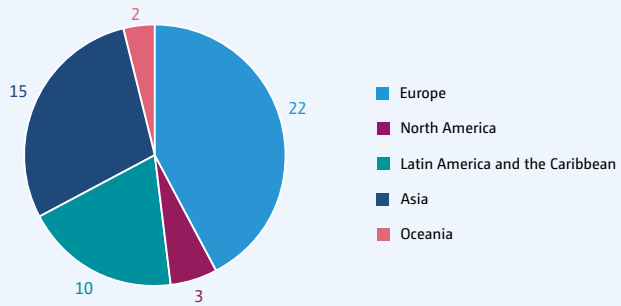
trillion at the end of 2022, up by USD 9 trillion from the 2021 level. As at April 2024, 191 FIs have science-based targets validated or extended by SBTi, with another 26 institutions that have targets set, while 11 institutions have removed or not extended their commitments under the SBTi framework. Among real-economy actors, close to 4,000 corporates had targets validated or set, while 528 corporates had expired or withdrawn their targets.[158]

477. Figure 4.4 provides an overview of the breadth and depth of geographical representation for eight private finance initiatives, comprising the seven initiatives under GFANZ and SBTi (only FIs that have committed to net-zero targets are considered), based on the country headquarters of the member or signatory. Owing to limited publicly available information, this analysis considers neither the geographical scope and distribution of underlying investment portfolios nor the relative size of corresponding assets under management across regions.

478. Across all initiatives, member institutions based in 57 countries are represented, a slight increase from 51 in 2022, with NZBA having the most diverse representation, at 44 countries. In contrast, NZICI includes representation from only three countries in North America, Europe and Oceania. The United Kingdom continues to be the only country represented across all eight initiatives; most countries with multiple coverage are in Europe and North America. Of the 57 countries represented, 22 (+1) countries are in Europe, 15 (+3) are in Asia, 10 (+1) are in Latin America and the Caribbean, 3 are in North America, 4 (+1) are in Africa and 2 are in Oceania.

Figure 4.5

Representation of countries, by region, in private finance initiatives, as at February 2024.



Note: the initiatives include the seven under GFANZ/Race to Zero and SBTi FI that have committed to net-zero targets. Based on a review of the membership pages of each initiative's website. The regional classifications have been taken from the United Nations Statistics Division, with an additional subregional classification for North America and for Latin America and the Caribbean.

479. The number of members or signatories across private finance initiatives continues to evolve across all world regions, although the majority of signatories remain concentrated in Europe and North America, with an increasing presence in Asia. Figure 4.5 shows the regional composition of all eight initiatives, and figure 6 shows the share of regional composition. Only NZBA and NZAM have a global presence in all regions. Significant potential exists to include a broader representation of countries in Asia, Africa, and Latin America and the Caribbean, particularly for the Paris Aligned Investment Initiative and NZICI, for which these regions were not represented as at July 2022. Even in initiatives with global coverage, there are differences in the number of members and signatories across regions, with members being concentrated in Asia, Europe and North America. For example, of the 320 signatories of NZAM, 192 are from Europe and only one is from Africa. Figure 4.6 shows that at least 45 per cent of the membership of each of the eight initiatives are from Europe, while Europe and North America together account for at least 60 per cent of the membership. NZBA and SBTI have comparatively greater representation across regions than the other initiatives. Across all initiatives, the representation of regions other than Europe and North America is not uniform. For example, Asia has 90 members across six initiatives (+38 compared with 2022), while Latin America has 29 (+9) members across four initiatives and Africa 12 (+4) members across six initiatives.

480. These findings of the regional composition of private finance initiatives are in line with other assessments. The G20 Sustainable Finance Working Group recognized that voluntary climate commitments by FIs are regionally centred in developed countries and that additional technical assistance and capacity-building support may be required in developing countries to enhance the setting, identification and tracking of the climate commitments of domestic FIs (G20, 2022).[159]

158) Author's analysis of SBTi target dashboard beta version, 23 April 2024, available athttps://sciencebasedtargets.org/target-dashboard.

159) G20. 2022. 2022 G20 Sustainable Finance Report. G20 Sustainable Finance Working Group. Available at https://g20sfwg.org/wp-content/uploads/2022/10/2022-G20-Sustainable-Finance-Report-2.pdf.

Figure 4.6

Regional composition (number) of private finance initiatives, as at February 2024

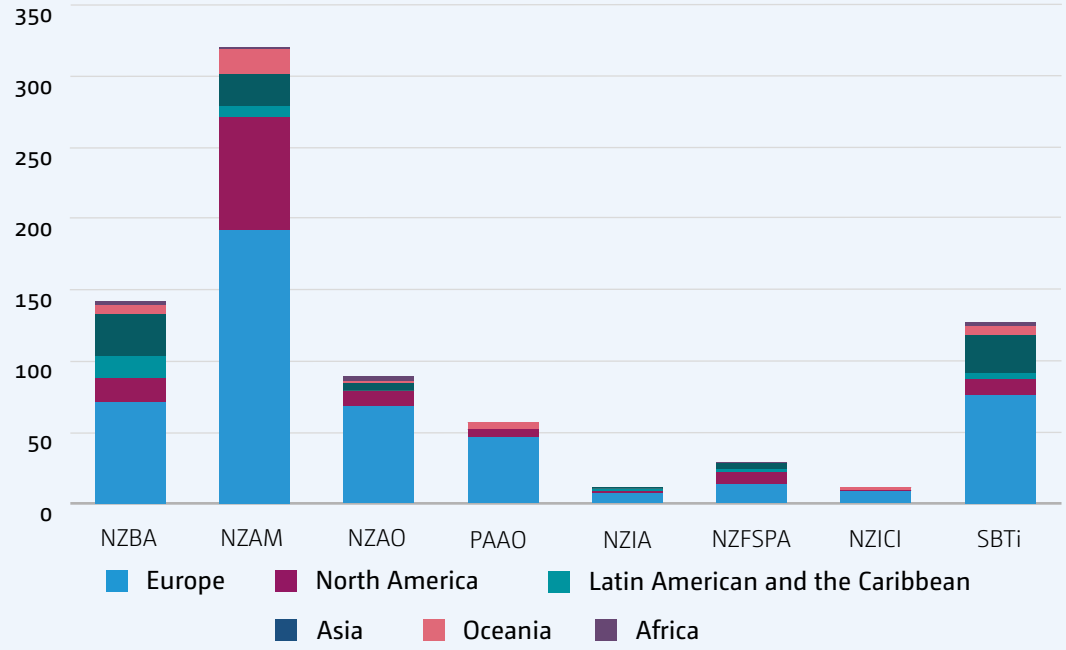
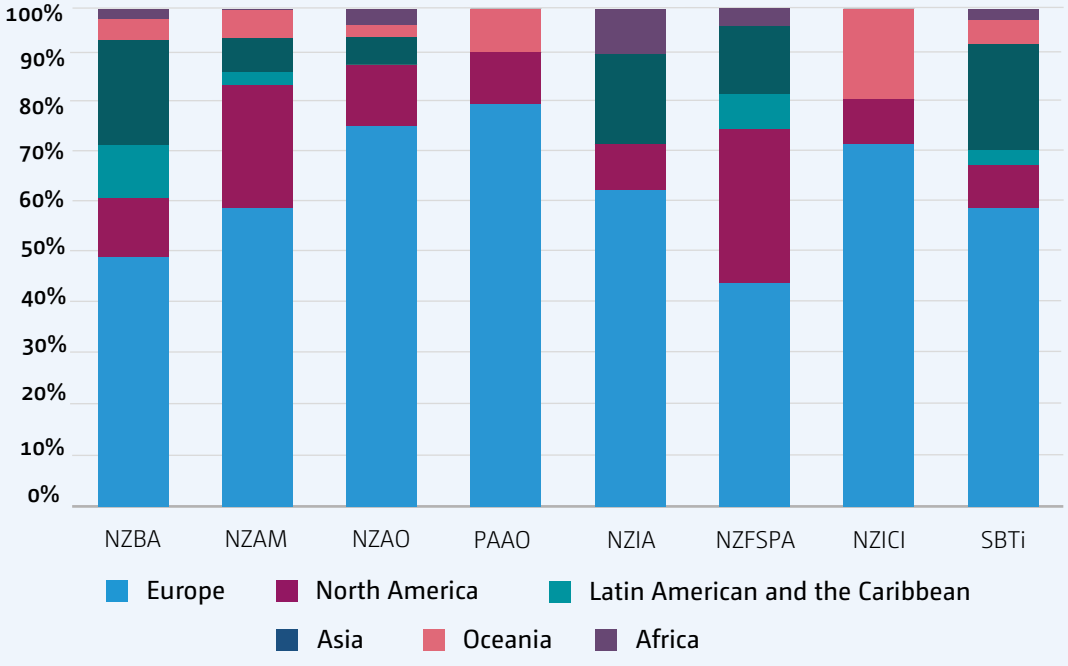


Figure 4.7

Regional composition (share) of private finance initiatives, as at February 2024



Note: based on a review of the membership pages of each initiative's website. The regional classifications have been taken from the United Nations Statistics Division, with an additional sub-regional classification for North America and for Latin America and the Caribbean.

481. Private (financial) sector reporting on the consistency of their efforts, commitments, and actual finance flows with climate goals is increasingly available at the asset, sub-portfolio, portfolio or institutional level. However, these approaches are not directly comparable or standardized across institutions. Financial sector initiatives publish regular progress reports that compile and analyse member institutions' climate efforts, which provide some quantified KPIs, such as the number of institutions and assets under management with net zero targets, finance deployed for climate solutions, or number or percentage of companies targeted for climate engagement. Aggregate information on cumulative financed emissions, assets under management that are already aligned with consistent pathways and emissions trajectories (as opposed to assets under management covered by the commitments), or on finance flows that may be inconsistent with climate goals is not available on aggregate level across institutions, due to data challenges and different methodological approaches taken by individual institutions.

482. CPI's Net Zero Finance Tracker provides aggregate and comparative analysis of 526 member institutions of GFANZ as at December 2022, that have a combined assets under management of more than USD 80 trillion.[160] Tracking progress is conducted for three dimensions (targets, implementation and impact), and includes indicators for, among others, mitigation targets, climate finance, green lending, divestment, and portfolio emissions and exposure, to misaligned assets or fossil fuels. Some of the main findings are that:

- Regarding targets, almost all FIs (98 per cent) have increasingly set mitigation and net zero targets, focussing on future emissions reductions of financing, while less than one third of institutions have concrete financing goals for climate investment or reducing or ending fossil fuel investment;.
- Regarding implementation, more than half of FIs have set up internal accountability frameworks, and climate risk management, strategy and disclosure processes for climate commitments and emissions. In addition, climate engagement is widespread among GFANZ members, although NZFT, drawing from InfluenceMap data, highlighted that many of the institutions also continue to be affiliated with industry associations that are considered to hinder climate progress;
- Regarding impact, NZFT found the average annual increase in green lending activities by GFANZ institutions to be 30 per cent between 2020 and 2022. At the same time, fossil fuel exposure of these FIs remain high as, according to IEA (IEA, 2022b), institutional investors held about 60 per cent of listed oil and gas companies and about 40 per cent of the largest power companies. Project-level financing assessments indicated a clean energy to fossil fuel investment ratio of about 2:1, representing an improvement over time, but still lower than what IEA and BNEF assess to be required for 1.5 °C compatible pathways (BNEF, 2023b; IEA, 2023e).

483. A diversity of efforts to enhance the tracking of private and public finance flows and actions that are relevant to achieving climate outcomes, and for the mainstreaming of climate considerations into financial decision-making are underway by international organizations and institutions, public and private financial sector actors, NGOs and academia. Table 4.2 presents a non-exhaustive list of publicly available sources of climate-related financial and non-financial information. In addition, a number of proprietary climate-related or ESG databases exist from commercial providers that are not listed here.

160) Available at https://netzerofinancetracker.climatepolicyinitiative.org/.

Table 4.2

Exemplary list of publicly available sources for climate-related financial or non-financial information

Source of information	Institution	Purpose and content
Climate Change Knowledge Platform	World Bank	Provides global data on historical and future climate, vulnerabilities and impacts, including climate risk country profiles
Climate Change Indicators Dashboard	IMF	Provides data on GHG emissions, mitigation, adaptation, the low-carbon transition, climate finance (green debt and carbon footprint of bank loans), and climate and weather, at the global and country level
NGFS Scenario Explorer	NGFS (central banks and financial supervisors)	Provides open-source information on NGFS climate scenarios, including transition and physical climate risks and opportunities, disaggregated by regions and countries
IPR	Coordinated by energy transition advisers and Theia Finance Labs and commissioned by Principles for Responsible Investment	Tracks global energy and land-use-related climate policy developments and provides a regular forecast scenario for the climate transition
ASCOR	Consortium of FIs and academia	Investor framework and database assessing the climate action and alignment of sovereign bond issuers, including on climate policies and targets, GHG emissions, climate finance and transparency of public spending
Climate Action 100+ progress update and net zero benchmarks	Investor-led initiative	Initiative that engages with the world's largest corporate GHG emitters and tracks climate performance against 11 indicators of the net zero benchmark, including GHG emissions and targets, capital allocation, disclosures and policy engagement
SBTi Monitoring Report and Target Dashboard	SBTi (consortium of FIs and NGOs and academia)	Tracks and assesses climate-related target-setting of corporates and FIs and highlights key trends in commitments, including on geographic distribution, economic sectors and design and stringency of target-setting
Banking on Climate Chaos	Consortium of NGOs	Analyses financial commitments (lending and underwriting of debt and equity issuances) from the world's 60 biggest banks for the fossil fuel sector as a whole and related companies in the value chain. Data derived in part from Bloomberg LP
Systems Change Lab	Systems Change Lab	Assesses global progress on climate action along 130 indicators, including 30 finance result indicators covering public and private finance flows, policies, disclosures and financial inclusion
ProjectViridis (blueprint)	BIS Innovation Hub and Monetary Authority of Singapore	Provides a blueprint for a climate risk platform for financial authorities, including information on financial system and institution-level financed emissions, reported and modelled emissions of key counterparties of FIs, and geographical mapping of entities' assets to assess transition risks from carbon pricing and physical hazard exposures
Climate change related indicators	ECB	Provides statistical indicators, harmonized at the euro area level, for analysis of climate risks that can affect monetary policy, price stability and the financial system

Source: technical authors' review

4.5. Insights from mapping information and trends relevant to Article 2, paragraph 1(c) of the Paris Agreement, including its reference to Article 9 thereof

484. Given the scale and diversity of financial flows and responsible actors, international FIs, financial supervisory authorities and researchers have noted that climate-related financial risks have to be addressed, and largely remain underpriced, in the financial system, and acknowledge the potential to direct capital in the global financial system towards climate-related purposes to close existing finance gaps, in particular in and towards developing countries, which requires going beyond the development finance system to all types of financial sources and actors (Brunetti et al., 2021; UNCTAD, 2023a; NGFS, 2024b; CFMCA, 2023; IPCC, 2023b). This section outlines emerging insights from mapping the information relevant to Article 2, paragraph 1(c), of the Paris Agreement including its reference to Article 9 of the Paris Agreement by considering developments from public and private actors in existing and new initiatives, where they have relevance to both domestic and international, and public and private, finance flows related to climate action.

485. The fourth BA identified that initiatives that have relevance to the goal set out in Article 2, paragraph 1(c) of the Paris Agreement had moved from those focused on advocacy and high-level commitments towards commitments for target-setting and reporting. In the sixth BA, in mapping the variety of actions that affect finance flows, a trend is observed towards concrete transition and implementation planning, including intermediate and short-term targets, financing and investment targets, finance-related policies and regulations by governments, and increasing demand for transparency and mandatory disclosures on the sustainability of finance flows and stocks

486. Ongoing growth is being seen in initiatives that have relevance to the goal set out in Article 2, paragraph 1(c) of the Paris Agreement, and relevant public initiatives are active in all world regions. The widest membership scope is seen in those initiatives that are voluntary in nature, with increases driven by government membership in initiatives. Governments, including ministries of finance and other public financial sector institutions, such as financial supervisors and central banks, MDBs, and regional and national PDBs and DFIs, are increasingly working on sustainable finance frameworks and approaches that aim to foster climate-compatible finance flows within and across jurisdictions around the globe.

487. Private initiatives also have a footprint in every world region collectively. The mapping demonstrates that the eight initiatives collectively have a footprint in every world region, but that many initiatives include actors whose headquarters are concentrated in Europe and North America. This may reflect stronger network ties between FIs operating in similar markets, but it underscores the need to expand the scope of these initiatives and incentivize institutions from a wide variety of contexts to participate. Data limitations continue to provide a barrier to analysing the geographical scope and focus of investment portfolios or assets covered by these initiatives. This would enable a more granular assessment of the geographical representation of efforts related to Article 2, paragraph 1(c), of the Paris Agreement by taking into account the finance flows and stocks beyond the consideration of countries of legal representation.

488. Mitigation continues to be a focus area of private sector actions; however, work to improve the consideration of adaptation and resilience is under way. The Coalition of Finance Ministers for Climate Action, NGFS, and various other public and private actors and initiatives have acknowledged the gap between mitigation and resilience and adaptation actions. The notion of transition finance and pathways has received increasing attention, including in the context of sustainable development and equitable and just transitions, and may provide one avenue for setting Article 2, paragraph 1(c) of the Paris Agreement in the wider context of Article 2 of the Paris Agreement, including its the preamble of Article 2, paragraph 1 and Article 2, paragraph2 of the Paris Agreement. For financing the transition of the whole economy in a just and equitable manner, further guidelines, definitions and criteria are required by market actors and civil society, in order to ensure science-based transition pathways that do not undermine or slow down climate-resilient transitions.

489. While the global stocktake reinforces that Article 2, paragraph 1(c) of the Paris Agreement is complementary to, and no substitute for Article 9 of the Paris Agreement, a diversity of views exist within the UNFCCC process on how the two articles relate to each other. Few mapped actions by national or private actors are framed in the context of these articles; however, synergies between them are seen in activities, including:

- The wide range of domestic efforts by developing country governments to enhance the development of sustainable finance flows and public finances, for example through green and sustainable bond issuances, climate budget tagging and climate

resilient public management frameworks, which are articulated to serve the achievement of national climate targets and international commitments by increasing climate finance from public and/or private sources
- Explicit efforts by private finance initiatives and individual FIs to increase investments in developing countries, as climate-relevant cross-border flows have been identified as a gap in the current distribution of global capital markets and finance flows;
- Ongoing international initiatives and forums including governments and other sector-specific stakeholders discussing the reform or evolution of the international and multilateral financial system or concrete instruments such as taxation and levies, to increase the flow of finance towards climate goals, in particular for supporting the developing countries efforts and enhancing inclusive governance;
- Methodologies for ensuring that all ODA and OOF is consistent with the climate, the environment and the SDG, exemplified by Paris alignment or SDG alignment approaches by MDBs and IDFC, and exclusion policies for incompatible activities;
- Financial, technical assistance and capacity-building support from developed to developing country institutions for fostering deep and inclusive domestic sustainable financial markets, including through DFIs, MDBs, multilateral climate funds and bilateral agencies
- Country-led investment platforms (see chapter 3.3.2 above) and plans that combine concessional and non-concessional financing and policy reforms and measures to implement just transitions towards the targets outlined in NDCs, NAPs and other climate and development plans in developing countries, with the participation and support of developing country governments, multilateral and bilateral DFIs, private FIs, and other financial and non-financial sector stakeholders

490. Global cooperation and sharing of expertise and knowledge is a widely expressed requirement by governments, ministries of finance, supervisors, central banks and private sector actors when devising actions that might be relevant towards the achievement of Article 2, paragraph 1(c), of the Paris Agreement. The IPCC concluded with high confidence that "near-term actions to shift the financial system over the next decade are critically important and possible with globally coordinated efforts" (Kreibiehl et. al, 2022).[161] This high degree of coordination will be required to direct or reallocate the large volumes of capital in the global financial system towards finance gaps, in particular in and towards developing countries, given the scale and diversity of financial flows and responsible actors, including international financial institutions and financial supervisory authorities (Brunetti et al., 2021; UNCTAD, 2023a; NGFS, 2024b; CFMCA, 2023; IPCC, 2023b).. It is also reflective of the differing mandates of actors in the financial system that not only take on different roles in efforts towards Article 2, paragraph 1(c), of the Paris Agreement but have varying degrees of integration of climate-related objectives or purposes in their operational mandates, which limits the scope for some FIs to take climate actions or to purposefully allocate capital. For example, only some central banks have an explicit mandate to support the transition to a low-carbon economy in line with the policies and climate targets of their governments (NGFS, 2024a). Similarly, the PRI legal framework for impact project, the exit of FIs and insurers from net zero alliances over concerns about fiduciary duties and anti-trust regulations, and the formation of the Net Zero Lawyers Alliance, which explores questions about the legal and regulatory frameworks that govern the financial system, underline that financial actors increasingly seek clarity on how they can contribute to climate action within their existing mandates and laws to which they are subject.

491. While international interoperability can be beneficial in approaches relevant for Article 2, paragraph 1(c), of the Paris Agreement, there is a clearly articulated demand for a regional, sectoral and nationally appropriate differentiation of approaches and methodologies responding to this goal, and for integrating social sciences and equity perspectives. This can refer to scenario choices and decarbonization expectations at the regional, sectoral or national level, a focus on engagement with emission-intensive industries rather than divestment, a reliance on NDCs and NAPs, and an emerging norm to formulate transition plans, encompassing whole-of-economy approaches and incorporating socio-economic considerations and safeguards in financial decision-making. There exists an inherent tension between a collective pursuit of Article 2, paragraph 1(c), of the Paris Agreement and a national or actor-based one..

492. Solutions explored to scale up climate finance in the context of Article 2, paragraph 1(c), of the Paris

161) Section 15.6, Available at https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-15/

Agreement point to the need for a system-wide and programmatic approach, often through the interaction of financial market actors, policymakers and regulators at the domestic and international level. For example, with regard to scaling up finance in developing countries, proposed approaches for managing and reducing the costs of capital and foreign exchange risks or to increase the participation of institutional investors through asset recycling and securitization would be strengthened by systemic coordination from domestic and international financial supervisors, regulators and private sector FIs. Similarly, private financial sector actors have made climate commitments in accordance with science-based pathways but their equitable and credible implementation requires government policies and real-economy actions to be commensurate in order to avoid a widening gap between ambition and implementation. Alliances such as NZAOA have highlighted that FI climate commitments could run the risk of excluding sectors of the economy if they do not transition at the foreseen pace, and also point out the reputational risks of FIs from climate commitments based on global or individual NDC ambition that are not followed up by appropriate climate actions.

493. At present, not much is known on the impact and status of implementation for both public and private efforts towards Article 2, paragraph 1(c) of the Paris Agreement, with many actors a number of steps removed from real economy activities. For example, bond trading, or macro-prudential supervision, is removed from bank lending to projects and government support incentives, which is in turn removed from actual spending. Divergent views on the scope of Article 2, paragraph 1(c) of the Paris Agreement complicates transparency and accountability towards its implementation and the assessment of collective progress. Anecdotal evidence demonstrates a shift in private initiatives from awareness towards changes in operating practices and financing allocation over time. Independent tracking of progress, however, finds that while internal accountability for climate commitments is growing, fewer efforts relate to oversight or addressing climate incompatible activities, and third-party assessments continue to report on sizeable volumes of private and public finance flows going towards emission-intensive purposes. Concerns of greenwashing in the tracking and monitoring of relevant approaches, highlighted in fourth BA, remain real.

494. A number of challenges and barriers are identified by actors to progress the actions they are undertaking that may be relevant to Article 2, paragraph 1(c), of the Paris Agreement:

- Data and method gaps remain, including for small and medium-sized enterprises and for climate-resilient pathways and scenarios that can guide actors. A multitude of methods, objectives, governance frameworks and tools that are not interoperable can increase fragmentation and increase transition costs and data inconsistencies (IMF, OECD, WB, 2023).
- Methodological choices on decarbonization targets and pathways taken by private economic actors can lead to complex questions regarding global equity considerations. Research has highlighted current gaps for the integration of social sciences and distributional considerations in target-setting methodologies, noting that decarbonization efforts by companies and FIs based on regional, national or sectoral averages, or based on best-in-class approaches, may not adequately account for the "[...] substantially higher than average financial, technological and human resources and capacity [...]" to act of many companies, in particular in advanced economies, and respectively for the lower capacities and resources of actors in other geographic locations or economic contexts (Reisinger et al., 2024, p.4).
- Less information is available about climate-resilient pathways and scenarios that can guide the consistency of finance flows, and the context-specific nature of adaptation impedes standardization of investment approaches or classes. Furthermore, many barriers have been identified to incentivizing much needed adaptation investments, given that resilience interventions often have large socioeconomic positive externalities, while up-front costs can be high and associated activities may have low direct revenue generation potentials, in particular for public infrastructure, goods and services, including social protection, health care systems, etc;
- The implementation of Article 2, paragraph 1(c), of the Paris Agreement requires a breaking down of the barriers to investment in developing countries in order to increase finance flows for climate and SDGs. The ability of the public and private financial sector in developing countries to access and mobilize finance for low emission, and climate-resilient pathways remains constrained, for example by high costs of capital, the terms of access to finance and limits on fiscal space, including from sovereign debt levels. Such a challenge requires a diversity of responses that reflect the geographical and country context and the need for targeted international and domestic actions and collaboration;

- The potential for adverse impacts of actions relevant to Article 2, paragraph 1(c), of the Paris Agreement within and between jurisdictions has come to the attention of the international community. Such risks have been identified particularly in developing countries that are highly exposed to physical climate risks, are highly commodity-dependent or have less diversified economies, or are geographically remote or less integrated into international economic markets and thus less able to navigate low-emission, climate-resilient transitions in an orderly way.[162] Political economy concerns have also been identified for ambitious or rapid shifts towards low-emission, climate-resilient finance flows while ensuring sustainable development and just transitions, pointing to the need for the coherence of initiatives, which are often established for different motives, and global inclusiveness in the pursuit of Article 2, paragraph 1(c), of the Paris Agreement. This can be exemplified by the diversity of fiscal policies available to the government, which are used in combination to suit national circumstances. The challenge is that while reform of fiscal policy, such as inefficient fossil fuel subsidies, might free up fiscal space and reduce burdens on the public budget (stabilizing government revenues), adjustment to fiscal support shifts traditional business and production models, with a differential effect on socioeconomic groups and entire communities.

162) FCCC/PA/CMA/2023/7/Rev.1.

Annexes

Annex A: Country and institution groupings used in the sixth BA

Annex I Parties (43)	Annex II Parties (24)	OECD member countries (38)	DAC members (30)
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
Belarus	Belgium	Belgium	Belgium
Belgium	Canada	Canada	Canada
Bulgaria	Denmark	Chile	Czechia
Canada	Finland	Colombia	Denmark
Croatia	France	Costa Rica	EU
Cyprus	Germany	Czechia	Finland
Czechia	Greece	Denmark	France
Denmark	Iceland	Estonia	Germany
Estonia	Ireland	Finland	Greece
EU	Italy	France	Hungary
Finland	Japan	Germany	Iceland
France	Luxembourg	Greece	Ireland
Germany	Netherlands	Hungary	Italy
Greece	New Zealand	Iceland	Japan
Hungary	Norway	Ireland	Luxembourg
Iceland	Portugal	Israel	Netherlands
Ireland	Spain	Italy	New Zealand
Italy	Sweden	Japan	Norway
Japan	Switzerland	Latvia	Poland
Latvia	Türkiye	Lithuania	Portugal
Liechtenstein	United Kingdom of Great Britain and Northern Ireland	Luxembourg	Republic of Korea
Lithuania	United States	Mexico	Slovakia
Luxembourg		Netherlands	Slovenia
Malta		New Zealand	Spain
Monaco		Norway	Sweden
Netherlands		Poland	Switzerland
New Zealand		Portugal	United Kingdom of Great Britain and Northern Ireland
Norway		Republic of Korea	United States
Poland		Slovakia	
Portugal		Slovenia	
Romania		Spain	
Russian Federation		Sweden	
Slovakia		Switzerland	
Slovenia		Türkiye	
Spain		United Kingdom of Great Britain and Northern Ireland	
Sweden		United States	
Switzerland			
Türkiye			
Ukraine			
United Kingdom of Great Britain and Northern Ireland			
United States			

Non-Annex I Parties (154)				
Afghanistan	Comoros	Iran (Islamic Republic of)	Nauru	South Africa
Albania	Congo	Iraq	Nepal	South Sudan
Algeria	Cook Islands	Israel	Nicaragua	Sri Lanka
Andorra	Costa Rica	Jamaica	Niger	State of Palestine
Angola	Côte d'Ivoire	Jordan	Nigeria	Sudan
Antigua and Barbuda	Cuba	Kazakhstan	Niue	Suriname
Argentina	Democratic People's	Kenya	North Macedonia	Syrian Arab Republic
Armenia	Republic of Korea	Kiribati	Oman	Tajikistan
Azerbaijan	Democratic Republic of	Kuwait	Pakistan	Thailand
Bahamas	the Congo	Kyrgyzstan	Palau	Timor-Leste
Bahrain	Djibouti	Lao People's Democratic	Panama	Togo
Bangladesh	Dominica	Republic	Papua New Guinea	Tonga
Barbados	Dominican Republic	Lebanon	Paraguay	Trinidad and Tobago
Belize	Ecuador	Lesotho	Peru	Tunisia
Benin	Egypt	Liberia	Philippines	Turkmenistan
Bhutan	El Salvador	Libya	Qatar	Tuvalu
Bolivia (Plurinational	Equatorial Guinea	Madagascar	Republic of Korea	Uganda
State of)	Eritrea	Malawi	Republic of Moldova	United Arab Emirates
Bosnia and Herzegovina	Eswatini	Malaysia	Rwanda	United Republic of
Botswana	Ethiopia	Maldives	Saint Kitts and Nevis	Tanzania
Brazil	Fiji	Mali	Saint Lucia	Uruguay
Brunei Darussalam	Gabon	Marshall Islands	Saint Vincent and the	Uzbekistan
Burkina Faso	Gambia	Mauritania	Grenadines	Vanuatu
Burundi	Georgia	Mauritius	Samoa	Venezuela (Bolivarian
Cabo Verde	Ghana	Mexico	San Marino	Republic of)
Cambodia	Grenada	Micronesia (Federated	Sao Tome and Principe	Viet Nam
Cameroon	Guatemala	States of)	Saudi Arabia	Yemen
Central African Republic	Guinea	Mongolia	Senegal	Zambia
Chad	Guinea-Bissau	Montenegro	Serbia	Zimbabwe
Chile	Guyana	Morocco	Seychelles	
China	Haiti	Mozambique	Sierra Leone	
Colombia	Honduras	Myanmar	Singapore	
	India	Namibia	Solomon Islands	
	Indonesia		Somalia	

List of ODA Recipients (138)				
Afghanistan	Côte d'Ivoire	Iran (Islamic Republic of)	Mozambique	South Africa
Albania	Cuba	Iraq	Myanmar	South Sudan
Algeria	Democratic People's Republic of Korea	Jamaica	Namibia	Sri Lanka
Angola	Democratic Republic of the Congo	Jordan	Nauru	Sudan
Argentina	Djibouti	Kazakhstan	Nepal	Suriname
Armenia	Dominica	Kenya	Nicaragua	Syrian Arab Republic
Azerbaijan	Dominican Republic	Kiribati	Niger	Tajikistan
Bangladesh	Ecuador	Kyrgyzstan	Nigeria	Tokelau*
Belarus	Egypt	Lao People's Democratic Republic	Niue	Thailand
Belize	El Salvador	Lebanon	North Macedonia	Timor-Leste
Benin	Equatorial Guinea	Lesotho	Pakistan	Togo
Bhutan	Eritrea	Liberia	Panama	Tonga
Bolivia (Plurinational State of)	Eswatini	Libya	Papua New Guinea	Tunisia
Bosnia and Herzegovina	Ethiopia	Madagascar	Paraguay	Türkiye
Botswana	Fiji	Malawi	Peru	Turkmenistan
Brazil	Gabon	Malaysia	Philippines	Tuvalu
Burkina Faso	Gambia	Maldives	Republic of Moldova	Uganda
Burundi	Georgia	Mali	Rwanda	Ukraine
Cabo Verde	Ghana	Marshall Islands	Saint Helena*	United Republic of Tanzania
Cambodia	Grenada	Mauritania	Saint Lucia	Uzbekistan
Cameroon	Guatemala	Mauritius	Saint Vincent and the Grenadines	Vanuatu
Central African Republic	Guinea	Mexico	Samoa	Venezuela (Bolivarian Republic of)
Chad	Guinea-Bissau	Micronesia (Federated States of)	Sao Tome and Principe	Viet Nam
China	Guyana	Mongolia	Senegal	Wallis and Futuna* West Bank and Gaza Strip
Comoros	Haiti	Montenegro	Serbia	Yemen
Congo	Honduras	Montserrat*	Sierra Leone	Zambia
Costa Rica	India	Morocco	Solomon Islands	Zimbabwe
	Indonesia		Somalia	

Source: https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-List-of-ODA-Recipients-for-reporting-2022-23-flows.pdf

*Countries and territories not classified in World Bank income groups. Estimated placement on the List

LDCs, as of 2018 (47)				
Afghanistan	Comoros	Lao People's Democratic Republic	Niger	Tuvalu
Angola	Democratic Republic of the Congo	Lesotho	Rwanda	Uganda
Bangladesh	Djibouti	Liberia	Sao Tome and Principe	United Republic of Tanzania
Benin	Eritrea	Madagascar	Senegal	Yemen
Bhutan	Ethiopia	Malawi	Sierra Leone	Zambia
Burkina Faso	Gambia	Mali	Solomon Islands	
Burundi	Guinea	Mauritania	Somalia	
Cambodia	Guinea-Bissau	Mozambique	South Sudan	
Central African Republic	Haiti	Myanmar	Sudan	
Chad	Kiribati	Nepal	Timor-Leste	
			Togo	

SIDS that are Member States of the United Nations (38)				
Antigua and Barbuda	Grenada	Mauritius	Saint Vincent and the Grenadines	Tuvalu
Belize	Guinea-Bissau	Micronesia (Federated States of)	Samoa	Vanuatu
Cabo Verde	Guyana	Nauru	Sao Tome and Principe	Bahamas
Comoros	Haiti	Palau	Solomon Islands	Bahrain
Cuba	Jamaica	Papua New Guinea	Suriname	Barbados
Dominica	Kiribati	Saint Kitts and Nevis	Timor-Leste	Seychelles
Dominican Republic	Maldives	Saint Lucia	Tonga	Singapore
Fiji	Marshall Islands			Trinidad and Tobago

Regional Groupings

IDFC – regional groupings							
East Asia and the Pacific	**Eastern Europe and Central Asia**	**Latin America and the Caribbean**	**Middle East and North Africa**	**South Asia**	**Sub-Saharan Africa**	**EU**	**Others**
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, Türkiye, 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, Syrian Arab Republic, Tunisia, West Bank and Gaza, and Yemen	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cabo Verde, Central African Republic, Chad, Comoros, Côte d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia and Zimbabwe	Austria, Belgium, Bulgaria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden	Trans-regional: include funds that are channelled to more than channelled through multilateral climate funds Australia, Canada, Japan and United States

Source: https://www.idfc.org/wp-content/uploads/2021/11/idfc-gfm2021-full-report-final.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	**Latin America and the Caribbean**	**Middle East and North Africa**	**South Asia**	**Non-EU Europe**	**Sub-Saharan Africa**	**Central Asia**	**East Asia and the Pacific**
Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark Estonia, Finland France, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom	Anguilla, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), 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, Sint Maarten(Dutch part), 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, Malta, Morocco, Oman, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, Tunisia, United Arab Emirates, West Bank and Gaza, Western Sahara and Yemen	Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kosovo,a, Montenegro, North Macedonia, Norway, Republic of Moldova, Russian Federation, Serbia, Switzerland, Türkiye, Ukraine and Uzbekistan	Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde 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	Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan	Cambodia, China, Cook Island, Fiji, Kiribati, Laos, Malaysia, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, New Caledonia, Palau, Philippines, Samoa, Solomon Islands, Thailand, Timor-Leste, Tuvalu, Vanuatu, Vietnam

Source: www.ebrd.com/2020-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), Former Yugoslav Republic of Macedonia, Kosovo,a Montenegro, Republic of Moldova, Serbia, Türkiye 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, West Bank and Gaza Strip, 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	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, 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, Togo, Uganda, United Republic of Tanzania, Zambia and Zimbabwe

Source: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DCD/DAC/STAT(2019)20/FINAL&docLanguage=En.

Note: (1) There is also a "Regional and Unspecified" group, which includes "Africa (regional)", "America (regional)", "Asia (regional)" and "Developing countries (unspecified)". (2) Sudan is not classified in the North Sahara regional group but grouped in Northern African.

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.

UN statistics division M49 classification					
Africa	**Latin America and the Caribbean**	**North America**	**Asia**	**Europe**	**Oceania**
Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principle, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Togo, Tunisia, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe	Argentina, Antigua and Barbuda, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Suriname, Trinidad and Tobago, Uruguay, and Venezuela (Bolivarian Republic of)	Canada, United States of America	Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Cyprus, Democratic People's Republic of Korea, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Republic of Korea, Saudi Arabia, Singapore, Sri Lanka, State of Palestine, Syrian Arab Republic, Tajikistan, Thailand, Timor-Leste, Türkiye, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam, and Yemen	Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Holy See, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, and United Kingdom of Great Britain and Northern Ireland	Australia, Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu

Source: https://unstats.un.org/unsd/methodology/m49/.

Annex B: Compilation of operational definitions of climate mitigation and adaptation finance in use

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
OECD-DAC Source: 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 removal by sinks, in line with the goals of the Paris Agreement. 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, technology transfer or research; or (d) developing countries' efforts to meet their obligations under the Convention and the Paris Agreement, namely the implementation and enhancement of mitigation actions. The activity will score "principal objective" if it directly and explicitly aims to achieve one or more of the above four criteria.	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 **MDB-IDFC 2021, Common principles for climate mitigation finance tracking, version 3.** **MDB-IDFC 2015, Common principles for climate change adaptation finance tracking**	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.	An activity can be classified as climate change mitigation where the activity, by avoiding or reducing GHG emissions or increasing GHG sequestration, contributes substantially to the stabilisation of GHG concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system consistent with the long-term temperature goal of the Paris Agreement. Eligibility The Common Principles recognise that a substantial contribution to climate change mitigation can involve the following three categories: (1) Negative- or very-low-emission activities, which result in negative, zero or very low GHG emissions and are fully consistent with the long-term temperature goal of the Paris Agreement, e.g., carbon sequestration in land use or some forms of renewable energy. Eligibility principle: have negative or near-zero net GHG emissions. (2) Transitional activities, which are still part of GHG-emissive systems, but are important for and contribute to the transition towards a climate-neutral economy, e.g., energy efficiency improvement in manufacturing that directly or indirectly uses fossil fuels. Eligibility principle: lack technologically or economically feasible very low-emission alternatives available; comply with high performance country or sector-specific standards, benchmarks or thresholds for GHG emissions or emission intensity that significantly exceed expected performance in a sector or activity; do not hamper the development or deployment of very low-emission activities; and do not lead to a lock-in of GHG emission-intensive assets that is inconsistent with the long-term goal of net-zero GHG emissions. (3) Enabling activities, which are instrumental in enabling other activities to make a substantial contribution to climate change mitigation, e.g., manufacture of very-low-emission technologies. Eligibility principle: are necessary for developing or implementing other eligible climate mitigation activities; do not hamper the development or deployment of negative or very low-emission activities; and do not lead to a lock-in of GHG emission-intensive assets that is inconsistent with the long-term goal of net-zero GHG emissions. No fixed quantitative thresholds are established within the eligibility list to facilitate the wish of individual institutions to set them according to own mandates and specific circumstances. Exclusion of activities related to support of upstream and midstream activities in the fossil fuel industry, electricity generation from coal or peat, and those that lead to deforestation. Both Brownfield and Greenfield activities are in scope but eligibility and criteria can differ, with a focus on ensuring that greenfield activities prevent long-term GHG lock-in and may enable structural changes required for meeting the long-term temperature goal, support emerging technologies with significant climate mitigation potential, meet global high-performance standards or high-efficiency benchmarks, or significantly exceed national or regional standards. - National circumstances and capabilities are accounted for as potential mitigation activities should consider, where possible, country-appropriate or regional benchmarks to facilitate progress towards national goals and avoid long-term lock-ins. Policy actions, technical assistance and programmes in support of the eligible activities are also eligible, provided that the link to eligible activities is clear or sufficiently demonstrated. A list of eligible activities, screening criteria and guidance is provided in Table 2–12 of the common principles for climate mitigation finance tracking.	– 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 adaption 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"	IDFC members will use the list in the revised common principles for climate mitigation finance tracking (MDB-IDFC, 2021) as a guide for a two-year transitional period. 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 (2015). The list is given in appendix D of the of the IDFC Green Finance Mapping Report 2021. 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 nonadaptation 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. In consistence with the principle of conservativeness, climate finance is underreported rather than over-reported in this case.

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
CPI **(Buchner et al., 2021)**	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, IDFC and Multilateral Climate Funds approaches. Updated sector classification drawing, amongst others, from the following economic activities classifications: MDB (2021), CBI taxonomy (CBI, 2021), IPCC WG3's AR5 (IPCC, 2014), the EU taxonomy (EU Technical Expert Group on Sustainable Finance, 2020), OECD' CRS purpose codes (OECD, 2021a). 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; • policy-induced revenue support mechanisms or other public subsidies whose primary function is to pay back initial investment costs (to avoid double counting) • Fossil fuel-based lower-carbon and energy-efficient generation (e.g. efficiency retrofits of coal-fired power plants) due to significant future carbon emissions lock-in • Plug in hybrid electric vehicles given their potential to pollute depending on the drivers' behaviour	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, IDFC and Multilateral climate funds approaches

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
IPCC (IPCC, 2021)	There is no agreed definition of climate finance. The term "climate finance" is applied to the financial resources devoted to addressing climate change by all public and private actors from global to local scales, including international financial flows to developing countries to assist them in addressing climate change. Climate finance aims to reduce net greenhouse gas emissions and/or to enhance adaptation and increase resilience to the impacts of current and projected climate change. Finance can come from private and public sources, channelled by various intermediaries, and is delivered by a range of instruments, including grants, concessional and non-concessional debt, and internal budget reallocations.	A human intervention to reduce emissions or enhance the sinks of GHGs.	In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
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
International Capital Markets Association Green Bond Principles[i]		Green projects are considered as assets, investments and supporting expenditures that address one or more environmental objectives including climate change mitigation. Eligibility: non-exhaustive eligibility list that comprises amongst others renewable energies, energy efficiency, clean transportation, green buildings, sustainable water and wastewater management, circular economy and eco-efficient products as well as the category of climate change adaptation that may include infrastructure resilience, climate information and early warning systems and other measures.	Green projects are considered as assets, investments and supporting expenditures that address one or more environmental objectives including climate change adaptation. Eligibility: non-exhaustive eligibility list that comprises the category of climate change adaptation that may include infrastructure resilience, climate information and early warning systems and other measures.
Climate Resilience Principles[j]			"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."
Adaptation Solutions Taxonomy (ASAP)[k]		Green projects are considered as assets, investments and supporting expenditures that address one or more environmental objectives including climate change mitigation and adaptation	Eligibility: Adaptation products technologies or services qualify in accordance with four criteria namely if these i) allow for the identification or management of physical climate risks, impacts and opportunities in order to contribute to preventing or reducing such impacts on people, nature, economic activities and assets; ii) offer a systemic contribution to improve resilience building (address existing financial, technological, capacity or information-related barriers to adaptation); iii) take place or be offered in developing countries; and finally, iv) are measurable and reportable in a quantitative or qualitative manner. Within its definition and screening criteria, the ASAP methodology builds on other classification schemes by taking up the concept of systemic adaptation, material physical risks and the Do-No-Significant Harm principle from the EU taxonomy and has been informed by the Climate Bonds Climate Resilience Principles and the Global Adaptation and Resilience (GARI) Working Group.

Institution	Climate finance definition	Mitigation finance definition	Adaptation finance definition
EU Sustainable finance taxonomy **(example of domestic arrangement)** **TEG 2020, technical annex**	The EU taxonomy identifies economic activities that make a substantial contribution climate change mitigation with performance thresholds and climate change adaptation with screening criteria. For all activities a cross-cutting 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 utilisation (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 croplands, grasslands and wetlands, afforestation, and regenerative agriculture; (g) establishing energy infrastructure required for enabling the decarbonisation 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 reduces 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 prioritised 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 recognises that an adaptation activity may target an entity (e.g. a corporation or a city) and/or a market, sector, or region

Annex C: Information on climate finance received reported in biennial update reports

Country	Latest BUR	Year	Format	Level of information	Title (of activity, programme or project)	Programme/ project description	Channel	Recipient entity	Implementing entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Type of support	Sector and subsector	Whether the activity has contributed to capacity building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results	Additional information	Other
Afghanistan	BUR1	2019	Tabular / Textual	Project	■				■	■	■						■			
Albania	BUR1	2021	No information on financial support received																	
Algeria	BUR1	2023	Tabular	Project	■	■	■			■	■						■			■
Andorra	BUR4	2021	No information on financial support received																	
Antigua and Barbuda	BUR1	2020	Tabular	Project	■	■			■	■	■	■					■	■		■
Argentina	BUR5	2023	Tabular	Project	■	■	■			■	■	■	■	■	■					■
Armenia	BUR3	2021	Tabular	Project	■	■				■		■				■				■
Azerbaijan	BUR2	2018	No information on financial support received																	
Bahamas	BUR1	2022	Tabular / Textual	Channel		■	■	■	■	■	■			■						
Bangladesh	BUR1	2023	Tabular / Textual	Channel		■	■		■	■	■	■	■							
Belize	BUR1	2021	Tabular	Project	■	■	■	■	■	■	■	■	■	■	■					
Benin	BUR1	2019	Tabular	Project	■	■					■					■		■		■
Bhutan	BUR1	2022	Tabular	Project / Institution	■	■	■			■	■	■	■							
Bosnia and Herzegovina	BUR3	2023	No information on financial support received																	
Botswana	BUR1	2019	Tabular	Project	■	■			■	■	■	■					■			■
Brazil	BUR4	2020	Tabular	Project	■					■	■	■		■	■	■				■
Burkina Faso	BUR1	2021	Tabular	Institution			■	■		■	■					■				
Burundi	BUR1	2022	Tabular / Textual	Project	■	■	■		■	■	■			■			■			■
Cambodia	BUR1	2020	Tabular	Project	■					■		■								■
Cabo Verde	BUR1	2024	Tabular	Project	■	■	■			■	■	■		■	■	■				■

Country	Latest BUR	Year	Format	Level of information	Title (of activity, programme or project)	Programme/ project description	Channel	Recipient entity	Implementing entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Type of support	Sector and subsector	Whether the activity has contributed to capacity building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results	Additional information	Other
Central African Republic	BUR1	2023	Tabular / Textual	Project																
Chile	BUR5	2022	Tabular / Textual	Project / institution																
China	BUR3	2023	Tabular	Project / sector																
Colombia	BUR3	2022	Tabular																	
Comoros	BUR1	2024	No information on financial support received																	
Costa Rica	BUR2	2019	Tabular	Institution and theme																
Côte d'Ivoire	BUR2	2024	Tabular																	
Cuba	BUR1	2020	Tabular	Project																
Democratic Republic of the Congo	BUR1	2022	Tabular / Textual	Channel																
Dominican Republic	BUR1	2020	Tabular	Project																
Ecuador	BUR2	2023	Text only	Finance received per year																
Egypt	BUR1	2019	Tabular	Project																
El Salvador	BUR1	2018	No information on financial support received																	
Eritrea	BUR1	2021	Tabular	Project																
Ethiopia	BUR1	2024	Tabular	Project, source, type of support																
Gabon	BUR1	2021	Tabular	Institution																
Georgia	BUR2	2019	Tabular	Project																
Ghana	BUR4	2024	Tabular / Textual	Instrument, sector, and theme																

Country	Latest BUR	Year	Format	Level of information	Title (of activity, programme or project)	Programme/ project description	Channel	Recipient entity	Implementing entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Type of support	Sector and subsector	Whether the activity has contributed to capacity building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results	Additional information	Other
Guatemala	BUR1	2023	Tabular	Project																
Guinea Bissau	BUR1	2020	Tabular	Project																
Guyana	BUR1	2024	Tabular	Project, source																
Honduras	BUR2	2024	Tabular	Project , source, type of support																
India	BUR3	2021	Tabular	Project																
Indonesia	BUR3	2021	Tabular	Institution																
Israel	BUR2	2023	No information on financial support received (Despite its status as non-Annex I country, Israel is an OECD member state, and receives little climate change related international aid)																	
Jamaica	BUR1	2016	Text only	Institution																
Jordan	BUR2	2021	Tabular	Project																
Kuwait	BUR1	2019	No information on financial support received																	
Kyrgyzstan	BUR2	2022	Tabular	Institution																
Lao PDR	BUR1	2020	Tabular	Project																
Lebanon	BUR4	2021	Tabular	Project																
Lesotho	BUR1	2021	Tabular	Project																
Liberia	BUR1	2021	Tabular	Institution																
Malawi	BUR1	2021	Text only	Project																
Malaysia	BUR4	2022	Tabular / Textual																	
Maldives	BUR1	2019	Tabular	Project																
Mali	BUR1	2023	Tabular	Channel																
Mauritania	BUR2	2021	Tabular	Project																
Mauritius	BUR1	2021	Tabular	Project																
Mexico	BUR3	2022	Tabular	Sector																

Country	Latest BUR	Year	Format	Level of information	Title (of activity, programme or project)	Programme/ project description	Channel	Recipient entity	Implementing entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Type of support	Sector and subsector	Whether the activity has contributed to capacity building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results	Additional information	Other
Micronesia (Federated States of)	BUR1	2023	Tabular	Project																
Mongolia	BUR2	2023	No information on financial support received																	
Montenegro	BUR3	2022	Tabular	Project																
Morocco	BUR3	2022	Tabular	Project																
Mozambique	BUR1	2022	Tabular	Project																
Namibia	BUR4	2021	Tabular	Project																
Nicaragua	BUR1	2023	Tabular	Project																
Niger	BUR1	2022	Tabular	Institution aggregate																
Nigeria	BUR2	2021	Tabular	Institution																
North Macedonia	BUR3	2021	Tabular	Project																
Oman	BUR1	2019	Text only	Project																
Pakistan	BUR1	2022	Tabular	Project																
Panama	BUR2	2021	Tabular	Project																
Papua New Guinea	BUR2	2022	Tabular	Project																
Paraguay	BUR3	2021	Tabular	Project																
Peru	BUR2	2019	Tabular	Project																
Republic of Korea	BUR4	2022	No information on financial support received																	
Republic of Moldova	BUR3	2021	Tabular	Project																
Rwanda	BUR1	2021	Tabular	Project																
Saint Kitts and Nevis	BUR1	2023	No information on financial support received	Only information on support received for preparation of the BUR and NC																

Country	Latest BUR	Year	Format	Level of information	Title (of activity, programme or project)	Programme/ project description	Channel	Recipient entity	Implementing entity	Amount received	Time frame	Financial instrument	Status (committed or received)	Type of support	Sector and subsector	Whether the activity has contributed to capacity building or technology transfer	Status of activity (planned, ongoing, completed)	Use, impact and estimated results	Additional information	Other
Saint Lucia	BUR1	2021	Tabular	Project																
Sao Tome and Principe	BUR1	2022	No information on financial support received																	
Saudi Arabia	BUR2	2024	No information on financial support received																	
Serbia	BUR2	2023	Tabular	Project																
Seychelles	BUR1	2024	Tabular	Project																
Sierra Leone	BUR1	2024	Tabular	Sector																
Singapore	BUR5	2022	No information on financial support received																	
Somalia	BUR1	2023	Tabular	Project																
South Africa	BUR5	2024	Tabular	Project																
Suriname	BUR1	2022	Tabular	Project / institution																
Tajikistan	BUR1	2019	Tabular	Project																
Thailand	BUR4	2022	Tabular	Theme (mitigation, adaptation and enabling environment)																
Togo	BUR2	2021	Tabular	Project																
Trinidad and Tobago	BUR1	2021	Tabular	Project																
Tunisia	BUR3	2022	Tabular																	
Uganda	BUR1	2019	Tabular	Project																
United Arab Emirates	BUR1	2023	No information on financial support received																	
Uruguay	BUR4	2021	Tabular	Project																
Uzbekistan	BUR1	2021	Tabular	Project																
Vanuatu	BUR1	2021	Tabular	Project																

Other				
Additional information				
Use, impact and estimated results				
Status of activity (planned, ongoing, completed)				
Whether the activity has contributed to capacity building or technology transfer				
Sector and subsector				
Type of support				
Status (committed or received)				
Financial instrument				
Time frame				
Amount received				
Implementing entity				
Recipient entity				
Channel				
Programme/ project description				
Title (of activity, programme or project)				
Level of information	Project	Project	Project	Project
Format	Tabular	Tabular	Tabular	Tabular
Year	2021	2018	2020	2021
Latest BUR	BUR3	BUR1	BUR1	BUR1
Country	Viet Nam	Yemen	Zambia	Zimbabwe

Annex D: Status of impact reporting of multilateral climate funds

Funds	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-2022 Source: Annual Performance Report for the Fiscal Year 2022	Adaptation	Number of projects/programmes approved	132	NA	
		Expected beneficiaries with vulnerability reduced (in millions)	35.92 (10.65 direct and 25.27indirect)		
		Early warning systems introduced	516	NA	
		Coastline protected (m)	162,275	NA	
		Policies introduced or adjusted to address climate change risks	99	NA	
		Natural assets (habitat, coastline) created, protected or rehabilitated (ha)	575,699	NA	

Funds	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other Impact metrics/comments
GCF Date operational: 2015 Data as of: December 2022 Source: • GCF-1 Progress Report (2023) • GCF/B.35/Inf.15/Add.02: Annual Progress Report on the Implementation of the Strategic Plan for the GCF 2020–2023 • GCF website	Adaptation / mitigation	Expected direct and indirect beneficiaries reached (in millions)	666	57	Other core impact metrics not reported • Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions • Hectares of natural resource areas brought under improved low emission and/or climate-resilient management practices Enabling environment indicators not reported (four-point scale scorecard: no, low, medium, high rating) • Institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner • Technology deployment, dissemination, development or transfer and innovation • Market development/transformation at the sectoral, local or national level • Knowledge generation and learning processes, and use of good practices, methodologies and standards. Paradigm shift potential indicators not reported (four-point scale where 0 = no evidence of change, 3 = high degree of evidence of change) • Scale (increase in results within and beyond the scope of the project) • Depth (integration/embeddedness) • Sustainability (continuity over time)
	Mitigation	GHG reduction (CO_2 eq Mt)	2 284	63	
	Adaptation / mitigation	Approved projects		209	
		Developing countries with approved projects		128	
		Projects under implementation		182	
GEF General Trust Fund Date operational: 1991 Data as of: June 2023 Source: • GEF-8 Corporate Scorecard June 2023	Mitigation	GHG reduction (CO_2 equivalent, millions of metric tonnes)	1 445.80 (of 1 500 programming target)	n/a	Sub-indicators • of which carbon sequestered or emissions avoided in the AFOLU sector 874.7 • of which emissions avoided 571.2 • Energy saved (gigawatt hours) 429 934.3 • Increase in installed renewable energy capacity per technology (megawatts) 5 431.0

Funds	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other Impact metrics/comments
	Adaptation / other objectives	People benefiting from climate change mitigation support	2.10 (of whom 1.0 million were women)	NA	
		Terrestrial protected areas created or under improved management for conservation and sustainable use (million ha)	48.9 (of the 150 programming target)	NA	Sub-indicators · of which newly created 1.9 · of which under improved management effectiveness 47.1
		Area of land restored (million ha)	6.0 (of the 10.0 programming target)	NA	Sub-indicators · of which degraded agricultural lands restored 3.2 · of which forest and forest land restored 1.7 · of which natural grass and shrublands restored 1.0 · of which wetlands (including estuaries and mangroves) 0.2
		Area of landscapes under improved practices (million ha; excluding protected areas)	73.3 (of the 195 programming target)	NA	Sub-indicators · of which area of landscapes under improved management to benefit biodiversity (qualitative assessment, non-certified) 44.6 · of which area of landscapes that meet national or international third-party certification and that incorporates biodiversity considerations 2.6 · of which area of landscapes under sustainable land management in production systems 25.7 · of which area of high conservation value forest loss avoided 0.4

Funds	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other Impact metrics/comments
		Other Core and Sub-Indicators	Expected results available	NA	Other expected core indicators reported in GEF-8 scorecard (includes series of sub-indicators not shown here) • Marine protected areas created or under improved management for conservation and sustainable use (million ha) • Area of marine habitat under improved practices to benefit biodiversity (million ha; excluding protected areas) • Number of shared water ecosystems (fresh or marine) under new or improved cooperative management • Globally over-exploited marine fisheries moved to more sustainable levels (kt) • Reduction, disposal/destruction, phase out, elimination, and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (kt of toxic chemicals reduced) • Reduction, avoidance of emissions of persistent organic pollutants to air from point and non-point sources (grams of toxic equivalent)

Funds	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other Impact metrics/comments
GEF LDCF and SCCF Date operational: 2002 Data as of: June 2023 • Source: GEF-8 Corporate Scorecard June 2023	Adaptation	Direct beneficiaries	NA	17 137 622	Subindicators of revised LDCF/SSCF results architecture (2018–2022) not reported • Outcome 1.1. Technologies and innovative solutions piloted or deployed to reduce climate-related risks and/or enhance resilience (based on four output indicators) • Outcome 1.2. Innovative financial instruments and investment models enabled or introduced to enhance climate resilience (based on two output indicators) • Outcome 2.1. Strengthened cross-sectoral mechanisms to mainstream climate adaptation and resilience (aligned with PPCR with some modification) (based on two output indicators) • Outcome 2.2. Increased ability of the country to access climate finance or other relevant, large-scale, programmatic investment (based on two output indicators) • Outcome 3.1. Climate-resilient planning enabled by stronger climate information decision-support services, and other relevant analysis (based on two output indicators) • Outcome 3.2. Institutional and human capacities strengthened to identify and implement adaptation measures (based on one outcome and one output indicator)
		Area of land managed for climate resilience (ha)	NA	621 100	
		Coastal or marine area managed for climate resilience (ha)	NA	3 512 877	
		Policies, plans, or development frameworks that mainstream climate resilience	NA	3 512 877	
		People trained to identify, prioritize, implement, monitor and/or evaluate adaptation strategies and measures (people)	NA	2 293	
		Private sector enterprises engaged in climate change adaptation and resilience action (number)	NA	2 293	

Funds	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 December 2022 Source: • CIF Annual Report 2022	Mitigation	Number of project/programme expected	161	125 (projects reporting results)	• Large infrastructure projects funded by CTF typically have a long gestation period, and only when they reach full operational capacity can they start to report 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 (million)	1.8 (passengers per day using low carbon public transit)	0.3 (passengers per day using low carbon public transit)	
		Installed renewable energy capacity	31.1 GW	12.4 GW	
		Electricity saving	15 110 GWh (annual energy savings)	5 816 GWh (annual energy savings)	
		GHG reduction (CO2 equivalent, millions of metric tonnes)	79.5 (per year)	32.3 (per year)	
		Volume of co-finance leveraged through CTF funding (million USD)	52 (cumulative)	225 (cumulative)	
CIF SREP Date operational: 2010 Data as of December 2022 Source: • CIF Annual Report 2022	Mitigation	Number of project/programme expected	54	51	
		Electricity production from renewable energy (MWh annually)	2 383 388 (per year)	222 219 (per year)	
		GHG reduction (CO_2 eq Mt)	2.7 (per year)	0.19 (per year)	
		Additional businesses with improved energy access	143 199	6 949	
		People with improved access to electricity (million)	6.4	1.8	

Funds	Theme	Indicator	Reporting on expected results (ex ante)	Reporting on achieved results (ex post)	Other Impact metrics/comments
CIF PPCR Date operational: 2008 Data as of December 2022 Source: • CIF Annual Report 2022		Volume of co-finance leveraged through CTF funding (millions of United States dollars)	3 116	1 274	
		Direct and indirect beneficiaries (million people)	NA	NA	
		National, sectoral and local/community development plans integrate climate change	839	837	Of which: • 3.2 million households (target: 5.3 million) • 5 688 communities (target: 14 415) • 3 251 public entities (target: 8 093) • 35 494 businesses (target: 43 817)
		Number of persons (government officials and public beneficiaries) receiving climate-related training	298 184	633 073	
		Knowledge products, systems and studies	830	935	

Funds	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 December 2022 Source: • CIF Annual Report 2022		Area covered by sustainable land and water management practices (ha)	328 597	409 305	Non-core indicators reported
		Area protected from flood/sea level rise/ storm surge (ha)	71 929	63 596	
		Hydromet and climate services stations (agromet stations, hydrological stations, and meteorological stations) built or rendered functional	1 627	2 512	
		Climate-improved roads constructed or rehabilitated (km)	2 695	2 905	
		Length of embankments, drainage, sea walls, waterways, and flood defence protections constructed or rehabilitated (km)	1 067	859	
		Climate-smart, small-scale structures (schools, hospitals, and disaster shelters) constructed	113 723	12,131	
		Number of beneficiaries of PPCR-supported adaptation financing facilities	10 238	13,931	
	Mitigation	Project pipeline / under implementation	53	52 (projects reporting results)	—
		Land covered under sustainable land management (million ha)	372	41	Other indicators not reported at the portfolio level (a mixture of quantitative and qualitative metrics by project): • Biodiversity • Governance • Land tenure, rights, access • Capacity development
		People with livelihood co-benefits (million)	3.8 (of whom 39.2 per cent were women)	6.3 (of whom 41.8 per cent were women)	
		GHG reduced (CO_2 eq, Mt)	100.46	27.73	

Annex E: Estimates of domestic climate finance by country

Domestic public climate finance as reported in BURs, CPEIRs, National budgets and tracking systems, and other sources (millions of United States dollars).

Country	Source of data				Annualized expenditure 2017–2018 (USD million)	Annualized expenditure 2017–2018 (USD million)	Annualized expenditure 2017–2018 (USD million)
	BUR	Budget	CPEIR	Other			
Antigua and Barbuda	x				3		
Argentina				x	2,349		
Armenia		x				73	
Austria			x			922	
Bangladesh			x		172	228	286
Cambodia		x			84	568	
Chile			x			365	
Colombia			x		812	711	
Côte d'Ivoire	x				6		
Eswatini		x					0.4
Ethiopia				x		1,900	
European Commission			x		34,669	39,326	139,060
France				x	16,880	23,812	26,155
Fiji			x			180	
Georgia	x				24		
Ghana	x					347	
Honduras			x		2,503	2,466	
India				x	3,420	8,184	
Indonesia		x	x		7,005	5,775	
Ireland			x			2,061	
Jamaica				x	161		
Kenya				x	752		
Lesotho	x					37	
Maldives	x				1		
Mauritania	x					0.3	
Mauritius	x					55	
Mexico			x		3,934	4,305	
Nepal			x		3,611	4,112	4,230

Nicaragua			x	x	14	80	
North Macedonia	x				78		
Pakistan				x	1,492		
Peru				x	1,424		
Philippines		x		x	4,060	3,784	5,465
Rwanda	x					5	
South Africa	x			x	914	203	
Sweden			x			362	
Timor-Leste		x				191	
United Kingdom							16,244
Viet Nam		x	x		438	1447	
Total	**11**	**7**	**13**	**11**	**84,806**	**101,500**	191,440

Note: compilation on a best effort basis; Each year's budget figures have been converted to United States dollars using the exchange rate from that year, as provided by the World Bank. This approach reflects fluctuations in currency values, meaning that even if a country's budget has increased in its local currency, it may appear as a decrease when converted to United States dollars owing to the appreciation of the dollar.

Annex F: Overview of widely used climate models and scenarios relevant to tracking consistency with Article 2, paragraph 1(c), of the Paris Agreement, including a description of ambition and temperature goal, scope, application, and reference sources

Pathway source	Scenarios	Description of ambition and temperature goal	Scope	Users	Reference information used (if any)
IPCC IPCC 1.5 °C Special Report (2018) AR6 (2022)	No/limited overshoot scenarios: P1–P3 (LED, S1, S2) (AR6 C1: SSP1-1.9, IMP-SP, LD, REN) High overshoot scenario (AR6 C2: IMP-NEG) Below 2 °C scenario (AR6 C3: SSP2-2.6, IMP-GS)	No or limited overshoot of 1.5 °C, global net anthropogenic CO2 emissions decline by about 45 per cent from 2010 levels by 2030, reaching net zero around 2050 (2045–2055 interquartile range) High overshoot: more than a 50 per cent likelihood of limiting warming to 1.5 °C with overshoot by 0.1–0.3 °C for up to several decades Below 2 °C: CO2 emissions are projected to decline by about 25 per cent by 2030 in most pathways and reach net zero around 2070	Global	Widely in use, for example NZAOA TSP3 for the portfolio level, CDP-WWF temperature rating methodology, NZBA	AR6 scenario database expanded upon the IPCC SR1.5 scenario explorer, containing 1,686 vetted scenarios, that were assessed with climate model emulators FAIR CICERO-SCM and MAGICC
IEA **Global Energy and Climate Model/Net Zero by 2050 Report (2021)**	NZE Stated policy and announced pledges Sustainable Development Scenario	Fifty per cent likelihood of limiting global warming to 1.5 °C, and also meets key SDGs by 2030, in particular universal energy access and air quality. Advanced economies take the lead and reach net zero earlier than developing countries STEPS reflecting current stated climate policies and APS assuming meeting current NDC and climate pledges (APS) as at the end of August 2023 Integrated model for achieving universal energy access, reducing air pollution and combating climate change (SDG 7, 3.9, 13), consistent with well below 2 °C scenarios and anticipated peak temperature of °C Sustainable Development Scenario: see above STEPS: reflecting current stated climate policies based as at 2020	Global (limited sectoral)	Widely in use, for example the basis of SBTI, TPI, IPR models, recommended a.o. by NZBA	IEA Global Energy and Climate Model, also including IEA Policy and Measures Database, IEA SDG 7 Tracker
Energy Technology Perspectives (2020) **(note that the 2023 update features NZE and APS scenarios only)**	Scenarios (Sustainable Development Scenario/ SPS) Sustainable Development Scenario: beyond 2 °C scenario SPS: above 2 °C scenario	Integrated model for achieving universal energy access, reducing air pollution and combating climate change (SDG 7, 3.9, 13), consistent with well below 2 °C scenarios and anticipated peak temperature of °C Sustainable Development Scenario: see above STEPS: reflecting current stated climate policies based as at 2020	Global	TPI, PACTA, Arabesque S-Ray Temperature Score	
OECM (2021, 2023)	OECM 1.5 °C trajectory	Sixty-seven per cent likelihood of limiting global warming to 1.5 °C, with a carbon budget of 400 Gt CO2 between 2020 and 2050, covering 12 industrial sectors	Global and sectoral	NZAOA TSP3 for sectoral pathways Recommended by NZBA	Energy balances: IEA GDP: World Bank Population: United Nations Projections

Pathway source	Scenarios	Description of ambition and temperature goal	Scope	Users	Reference information used (if any)
NGFS **V.4 (2023)**	Orderly scenarios: net zero by 2050 Low demand: below 2 °C Disorderly scenarios: delayed transition Hot house world: NDC scenario, current policies Too little, too late: fragmented world	Orderly: net zero by 2050 limits global warming to below 1.5 °C (50 per cent chance with low or no overshoot) and reaches net zero by 2050 Low demand also below 1.5 °C through different technology choices Below 2 °C gradually increases policy stringency for a 67 per cent chance of limiting warming to below 2 °C Disorderly: delayed transition assumes emissions increase until 2030 and strong policies are needed to limit warming to 2 °C with a 67 per cent chance Hot house world: current policies follow the trajectory of current climate policies, resulting in global warming around 2.9 °C, while the NDC scenario assumes the implementation of current national pledges, resulting in global warming of around 2.4 °C Too little, too late: fragmented world assumes fragmented climate policies, countries without net zero targets follow current trajectories, others reach targets partially (80 per cent), resulting in around 2.3 °C warming	Global and sectoral, downscaling methodology for 184 countries	Central banks and financial supervisory authorities Recommended by NZBA	Based on three transition scenario models, REMIND-MAgPIE, GCAM and MESSAGEix-GLOBIOM, macroeconomic modelling with NiGEM and physical risk modelling with global temperature paths based on EM-DAT and CLIMADA data Updated GDP and population data from IMF (2022)
IPR (2021)	IPR Forecast Policy Scenario IPR 1.5 °C Required Policy Scenario	Forecasts 1.7–1.8 °C warming with 50–66 per cent probability, and a 90 per cent likelihood of limiting global warming to below 2 °C Assumes net zero emissions by 2050 for developed and by 2060 for developing countries. Policy forecast of anticipated policy and technology developments and macroeconomic, energy, nature and land-use models Net zero total CO2 emissions by 2050 (no likelihood, carbon budget or reliance on negative emissions stated)	Global (limited) and sectoral (covering only the G20, Nigeria and Viet Nam)	FIs, commissioned by PRI and supported by industry and NGO stakeholders, integrated in the PACTA Transition Disruption Metric	Forecast Policy Scenario: building on the IEA Net Zero Scenario, deepening analysis on policy, land use, emerging economies, NETs and value drivers IEA NZE (2021
Sector-specific					
Carbon Risk Real Estate Monitor	1.5 °C and 2 °C degree pathways for the real estate industry	Tool outlines 1.5 °C and 2 °C decarbonization pathways by breaking down the global anthropogenic GHG emissions budget consistent with the Paris Agreement towards individual countries, the respective real estate sector in those countries, property types and individual assets	Forty-four countries (90 per cent of institutional property stock)	Supported by major industry bodies, such as SBTi, European Association for Investors in Non-Listed Real Estate Vehicles, Institutional Investors Group on Climate Change NZAOA and others	

Pathway source	Scenarios	Description of ambition and temperature goal	Scope	Users	Reference information used (if any)
SBTI maritime guidance	1.5 °C aligned pathways for the shipping industry	Linear and logistic 1.5 °C aligned maritime decarbonization scenarios based on IPCC 1.5 °C scenarios with low/no overshoot, applying the SDA approach to the global carbon budget, resulting in a sector budget of 12.2 Gt CO2 (2020–2050) The logistic scenario assumes differentiated decarbonization rates, with a more rapid decarbonization in the years between 2030 and 2040, and low and zero emission shipping fuels to replace fossil fuels almost completely by 2045	Global	Shipping industry, investors	Based on IPCC SR1.5 emissions trajectory and carbon budget (2020–2050) and sector growth forecast using IPCC RCP2.6 and SSP 2 (logistics from the fourth IMO GHG study (2020)

Annex G: Submissions received in response to the call for evidence

The table below presents the stakeholders that responded to a call for evidence on information and data for the preparation of the sixth BA.

Submission	Date
Hindou Oumarou Ibrahim, Chair of the UN Permanent Forum on Indigenous Issues	20 June 2024
UNCTAD	28 June 2024
Oxfam	30 June 2024
KAPSARC	30 June 2024
Global CCS Institute	1 July 2024
OPEC	1 July 2024

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