Advance unedited version

Decision -/CP.26

Matters relating to the Standing Committee on Finance

The Conference of the Parties,

Recalling Articles 4 and 11 of the Convention,

Also recalling decisions 12/CP.2, 12/CP.3, 1/CP.16, paragraph 112, and 2/CP.17, paragraphs 120–121, 5/CP.18, 5/CP.19, 7/CP.19, 6/CP.20, 6/CP.21, 8/CP.22, 7/CP.23, 8/CP.23, 4/CP.24, 11/CP.25 and 5/CMA.2,

Taking note of decision -/CMA.3,[1]

1. *Welcomes* the 2020 and 2021 reports of the Standing Committee on Finance;[2]

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

2. *Also welcomes* the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows of the Standing Committee on Finance,[3] in particular the summary,[4] and *endorses* its key findings, as contained in annex I;

3. *Notes* that global climate finance flows were 16 per cent higher in 2017–2018 than in 2015–2016, reaching an annual average of USD 775 billion; the 2017–2018 annual average of public financial support reported by Parties included in Annex II to the Convention in their biennial reports[5] (USD 48.7 billion) represents an increase of 2.7 per cent from the annual average reported for 2015–2016; the annual average of climate finance from multilateral development banks' own resources to developing countries and emerging economies (USD 36.6 billion) represents a 50 per cent increase since 2015–2016; and UNFCCC funds and multilateral climate funds approved USD 2.2 billion and USD 3.1 billion for climate finance projects in 2017 and 2018, respectively;

4. *Welcomes* the improved granularity of data in the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows and *encourages* developed country Parties and climate finance providers, as well as multilateral and financial institutions, private finance providers and other relevant institutions, to continue to enhance the availability of granular, country-level data on mitigation and adaptation finance;

5. *Calls upon* developed country Parties and other climate finance providers to continue to enhance the harmonization of methodologies for tracking and reporting climate finance provided and mobilized;

6. *Recognizes* the fact that there is no multilaterally agreed definition of climate finance, *notes* the submissions received in response to decisions 11/CP.25 and 5/CMA.2, which highlighted that some Parties noted how the lack of a common definition impacts the ability to track and assess climate finance, while other Parties mentioned that a single definition would not be useful, and *also notes* that the operational definitions in use generally reflect a common understanding of what is considered mitigation and adaptation finance;

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[1] Draft decision entitled "Matters relating to the Standing Committee on Finance" proposed under agenda item 8(a) of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session.

[2] FCCC/CP/2020/4−FCCC/PA/CMA/2020/3 and FCCC/CP/2021/10–FCCC/PA/CMA/2021/7.

[3] Standing Committee on Finance. 2021. *Fourth (2020) Biennial Assessment and Overview of Climate Finance Flows*. Bonn: UNFCCC. Available at https://unfccc.int/sites/default/files/resource/54307_1%20-%20UNFCCC%20BA%202020%20-%20Report%20-%20V4.pdf.

[4] FCCC/CP/2021/10/Add.1–FCCC/PA/CMA/2021/7/Add.1.

[5] Reports submitted as at October 2020.

7. *Requests* the Standing Committee on Finance to continue its work on definitions of climate finance, taking into account the submissions received from Parties on this matter, with a view to providing input for consideration by the Conference of the Parties at its twenty-seventh session (November 2022);

8. *Invites* the operating entities of the Financial Mechanism and other institutions providing climate finance to consider the operational definitions of climate finance of the Standing Committee on Finance with a view to ensuring that finance provided addresses the needs of developing country Parties, while respecting their existing policies;

9. *Welcomes* the mapping of the information relevant to Article 2, paragraph 1(c), of the Paris Agreement in the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows and *takes note* of the key findings of the report, including that banks representing over USD 37 trillion in assets and institutional investors with USD 6.6 trillion in assets have pledged to align their lending and investments with net zero emissions by 2050;

10. *Encourages* Parties to ensure that just transition financing is incorporated into approaches to align climate action with the goals of the Paris Agreement;

II. First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement

11. *Welcomes* the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement[6] of the Standing Committee on Finance, in particular the executive summary,[7] and *endorses* its key findings and recommendations, as contained in annex II;

12. *Notes* that nationally determined contributions from 153 Parties included 4,274 needs, with 1,782 costed needs identified across 78 nationally determined contributions, cumulatively amounting to USD 5.8–5.9 trillion up until 2030, and that, although developing country Parties identified more adaptation needs than mitigation needs, more costs were identified for the latter, which may not imply that mitigation needs are greater but rather that there is a lack of available data, tools and capacity for assessing adaptation needs;

13. *Also notes* that the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement is the first of its kind, with important areas that will need to be further developed;

14. *Further notes* that the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement does not fully cover the needs and costs of developing countries and all regions as a result of limited availability of information and *acknowledges* that financial and technical support will enhance developing countries' abilities to update the reporting of qualitative and quantitative information and data on their needs;

15. *Expresses its concern* that the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement does not have disaggregated data for small island developing States;

16. *Emphasizes* that there is a particular challenge in deriving cost estimates for climate adaptation and enhancing resilience needs and, in this context, deriving cost estimates for averting, minimizing and addressing loss and damage needs;

17. *Encourages* developing country Parties to consider the insights into methodologies identified in the first report on the determination of the needs of developing country Parties

[6] Standing Committee on Finance. 2021. *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Bonn: UNFCCC. Available at https://unfccc.int/topics/climate-finance/workstreams/determination-of-the-needs-of-developing-country-parties/first-report-on-the-determination-of-the-needs-of-developing-country-parties-related-to-implementing.

[7] FCCC/CP/2021/10/Add.2–FCCC/PA/CMA/2021/7/Add.2.

related to implementing the Convention and the Paris Agreement when costing and determining needs;

18. *Invites* the operating entities of the Financial Mechanism, United Nations agencies, multilateral and bilateral financial institutions, and other relevant institutions to make use of the information contained in the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement when supporting developing country Parties in identifying and costing needs;

19. *Requests* the Standing Committee on Finance, in preparing future reports on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement, to continue to reach out to developing country Parties and relevant developing country stakeholders when generating data and information on needs;

III. Report of the Standing Committee on Finance

20. *Expresses its appreciation* to the Governments of Belgium, Japan and Norway and to the European Commission for their financial contributions to support the work of the Standing Committee on Finance;

21. *Endorses* the workplan of the Standing Committee on Finance for 2022[8] and *underlines* the importance of the Standing Committee on Finance focusing its work in 2022 in accordance with its current mandates;

22. *Also endorses* the outline of the technical report of the fifth Biennial Assessment and Overview of Climate Finance Flows of the Standing Committee on Finance and *underscores* that this report will continue to contribute to assessing the achievement of the goal of mobilizing jointly USD 100 billion per year by 2020 in the context of meaningful mitigation action and transparency on implementation, in accordance with decision 1/CP.16;[9]

23. *Notes* the high-level summary report of the first part of the 2021 Forum of the Standing Committee on Finance on finance for nature-based solutions carried out in a hybrid format on 15 and 16 October 2021 and *requests* the Standing Committee on Finance to organize the second part of the Forum in 2022, subject to health and safety considerations arising from the coronavirus disease 2019 pandemic;

24. *Notes* that the Standing Committee on Finance was not able to produce draft guidance to the operating entities of the Financial Mechanism and that it has not agreed on recommendations from the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows, and in this regard *requests* the Committee to improve its working modalities;

25. *Notes with appreciation* the efforts of the Standing Committee on Finance in enhancing engagement with stakeholders in the context of its workplan;

26. *Encourages* the Standing Committee on Finance to continue to enhance its efforts towards ensuring gender-responsiveness in implementing its workplan;

27. *Requests* the Standing Committee on Finance to report to the Conference of the Parties at its twenty-seventh session on its progress in implementing its 2022 workplan;

28. *Also requests* the Standing Committee on Finance to consider the guidance provided to it in other relevant decisions of the Conference of the Parties.

[8] FCCC/CP/2021/10–FCCC/PA/CMA/2021/7, annex II.
[9] FCCC/CP/2021/10/Add.5–FCCC/PA/CMA/2021/7/Add.5.

Annex I*

Summary by the Standing Committee on Finance of the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows

[English only]

I. Context and mandates

1. The SCF assists the COP in exercising its functions with respect to the Financial Mechanism of the Convention, including in terms of measurement, reporting and verification of support provided to developing country Parties, through activities such as the BA. The SCF also serves the Paris Agreement in line with its functions and responsibilities established under the COP, including the BA.[1]

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

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

4. **The fourth (2020) BA includes mapping of information relevant to the long-term goal outlined in Article 2, paragraph 1(c), of the Paris Agreement on making finance flows consistent with a pathway towards low GHG emission and climate-resilient development**. The fourth BA provides the first mapping exercise, to be conducted every four years, to identify the latest actions and activities of different actors related to making finance flows consistent with low GHG emission and climate-resilient development pathways, including national Governments, development finance institutions, central banks and regulators, multilateral finance institutions, and climate funds, as well as private sector actors such as corporations, banks and investors. Information produced by United Nations entities and initiatives, and under other multilateral processes, as well as the perspective of civil society organizations and the academic community, was also explored. Emerging methodologies, indicators and data sets to support tracking the consistency of finance flows are also discussed in respective chapters of the technical report (see para. 5 below).

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

* For a list of acronyms and abbreviations, see document FCCC/CP/2021/10/Add.1−FCCC/PA/CMA/2021/7/Add.1.

1 Decisions 2/CP.17, para. 121(f); and 1/CP.21, para. 63.

2 Decisions 1/CP.18, para. 71; 5/CP.18, para. 11; 3/CP.19, para. 11; 8/CP.22, annex, para. 37(f); 4/CP.24, paras. 4, 5, and 10; and 19/CMA.1, para. 36(d).

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

range of sources. It was subject to extensive stakeholder input and expert review, but remains a product of the external experts.

II. Challenges and limitations

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

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

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

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

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

III. Key findings

A. Methodological issues related to transparency of climate finance

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

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

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

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

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

16. Parties' submissions on operational definitions of climate finance in use highlighted a range of views on the need for, and on the form and scope of, a common definition of climate finance. Some Parties noted that a single definition would not be useful, or should be broad enough to cater for the dynamic and evolving nature of climate finance due to a variety of factors, including NDCs and implementation of the enhanced transparency framework

over time, ways of tracking progress related to Article 2, paragraph 1(c), of the Paris Agreement, and changes in methodologies and definitions for mitigation and adaptation due to data availability or improvements in processes and knowledge.

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

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

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

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

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

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

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

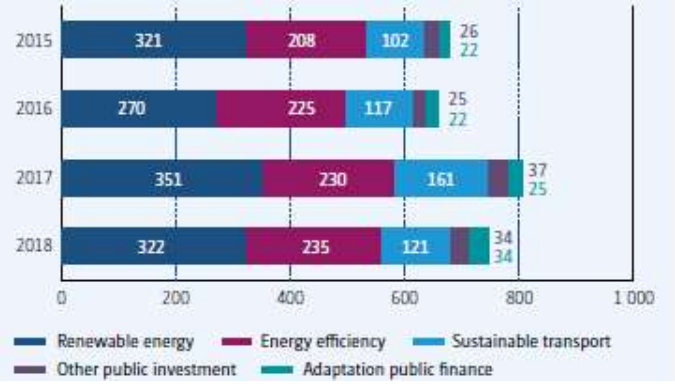
(c) Understanding which finance flows that go towards realizing the activities and actions should be tracked by the stakeholder;

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

B. Overview of climate finance flows in 2017–2018

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

Figure 1
Global climate finance flows in 2015–2018
(Billions of United States dollars)



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

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

25. **Climate finance from developed to developing countries increased through various channels**. Total public financial support reported by Annex II Parties in their BRs submitted (as at October 2020) amounted to USD 45.4 billion in 2017 and USD 51.8 billion in 2018. The annual average (USD 48.7 billion) represents an increase of 2.7 per cent from the annual average reported for 2015–2016. Climate-specific financial support, which accounts for up to three fourths of the financial support reported in the BRs, increased by 13 per cent on a comparable basis to an annual average of USD 36.3 billion. Most climate-specific financial support was reported through bilateral, regional and other channels, with USD 28.1 billion in 2017 and USD 31.8 billion in 2018.

26. Mitigation finance constitutes the largest share of climate-specific financial support through bilateral channels at 64 per cent. However, the share of adaptation finance increased from 15 per cent in 2015–2016 to 21 per cent in 2017–2018 as it grew at a higher rate than mitigation finance.

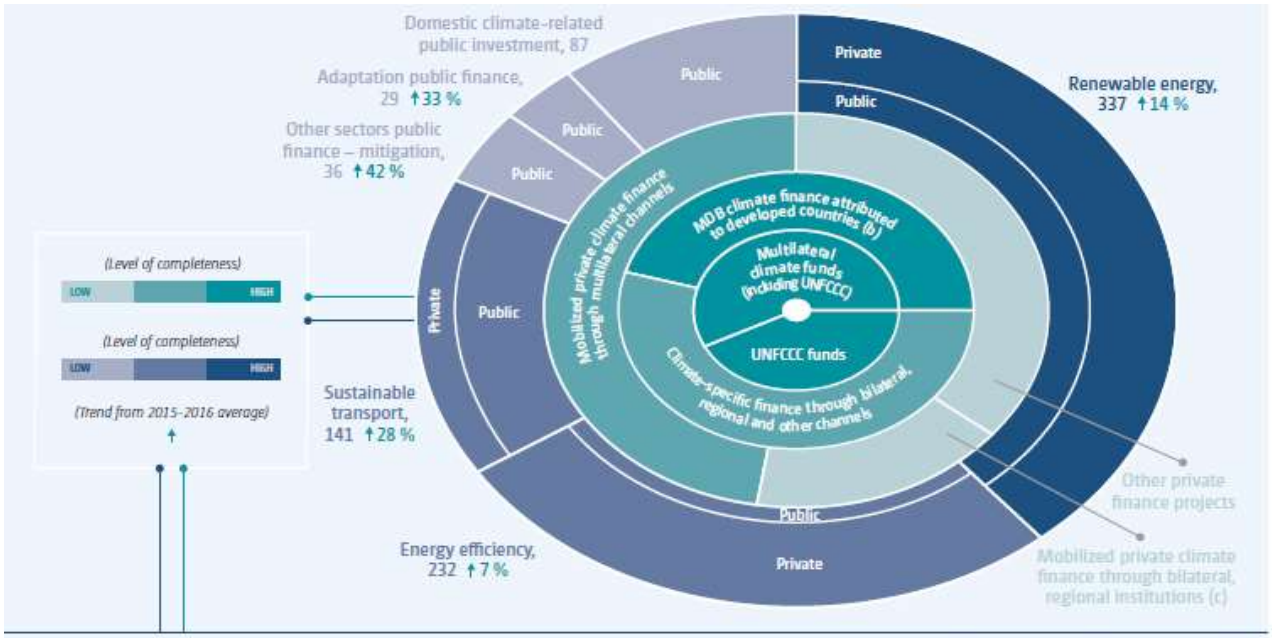
27. UNFCCC funds and multilateral climate funds approved USD 2.2 billion and USD 3.1 billion for climate finance projects in 2017 and 2018, respectively. The annual average for 2017–2018 (USD 2.7 billion) represents an increase of approximately 39 per cent compared with those in 2015–2016, owing primarily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

Mechanism, the seventh replenishment of the GEF resulted in USD 4.1 billion in pledges and USD 802 million allocated to the climate change focal area, compared with USD 4.4 billion in total pledges and USD 1.26 billion allocated to the climate change focal area in the sixth replenishment. The first replenishment of the GCF pledging conference in 2019 amounted to USD 9.8 billion, compared with USD 10.2 billion from the initial resource mobilization pledging conference in 2014.

Figure 2

Climate finance flows in 2017–2018

(Billions of United States dollars, annualized)



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

Notes: (1) Value discounts transport energy efficiency estimates by 8.5 per cent to account for overlap with electric vehicle estimates, same as in previous years; (2) From Annex II to non-Annex I Parties. Values derived from calculating attributed shares of Annex II Parties per MDB multiplied by the climate finance provided to non-Annex I Parties from MDBs' own resources; (3) Estimates include private finance mobilized through public interventions from developed countries.

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

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

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

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

C. Assessment of climate finance flows

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

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

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

combining different types of financial instruments, or technical assistance with capital flows, which can often lead to greater innovation or more sustainable implementation.

Characteristics of international public climate finance flows in 2017–2018

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

Note: All values based on approvals and commitments.

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

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

[c] Bilateral climate finance data are sourced from Annex II Parties' BRs (that further include regional and other channels) for the annual average and thematic split. The financial instrument data are taken from data from OECD DAC, referring only to concessional flows of climate-related development assistance reported by OECD DAC members. In section C of the summary and chap. III of the technical report, "bilateral finance" refers only to concessional flows of climate-related development assistance reported by OECD DAC members.

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

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

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

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

shares of climate finance approvals from multilateral climate funds are programmed through multilateral accredited and implementing entities.

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

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

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

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

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

43. **The drivers of climate finance flows can consist of both demand- and supply-side actions but may differ in terms of mitigation or adaptation objectives**. For mitigation finance, policy targets and support mechanisms have played a major role in driving climate finance flows, such as in the role of long-term fixed prices in supporting renewable energy deployment and more recently purchasing incentives for electric vehicles and bans on the

sale of new combustion engine vehicles in the long term. Cross-cutting features of enabling environments, such as currency stability of exchange rates, stability of policies and enforcement of contracts, particularly in driving finance towards sustainable land use, and maintenance of political will and support, have also proven to be significant drivers.

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

45. **Although climate finance flows are increasing, they remain relatively small in the broader context of other finance flows, investment opportunities and costs**. Climate finance accounts for just a small proportion of overall finance flows, as shown in figure 3. The level of climate finance is considerably below what would be expected in view of the investment opportunities and needs that have been identified. However, although climate finance flows must obviously be scaled up, it is also important to ensure the consistency of finance flows as a whole (and of capital stock) with the long-term goals of the Paris Agreement, specifically those set out in its Article 2.

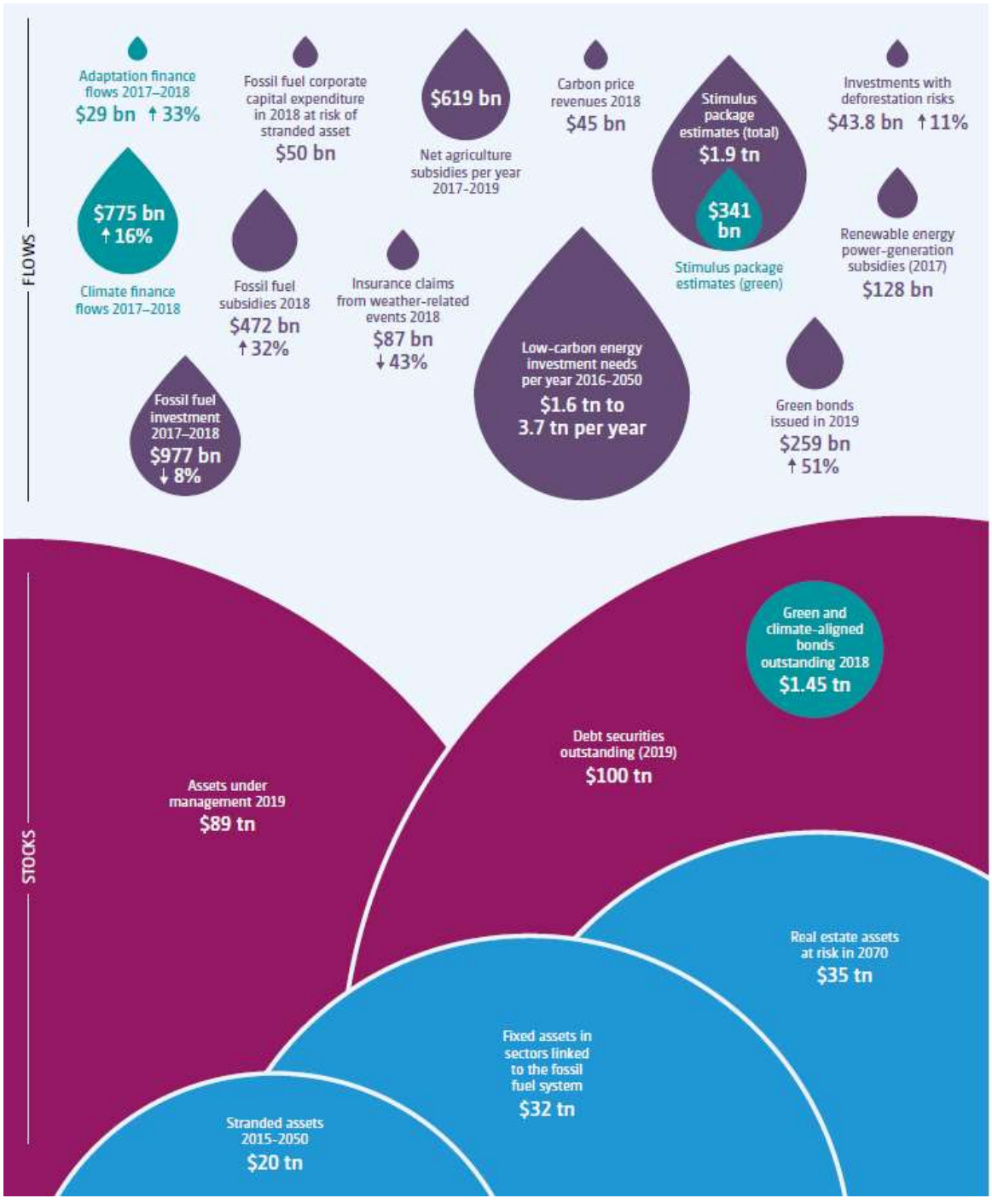
46. **Financial flows and stocks in GHG-intensive activities remain concerningly high**. Fossil fuel investments amounted globally to USD 977 billion in 2017–2018, while fossil fuel subsidies amounted to USD 472 billion in 2018. Fossil fuel corporate capital expenditure at risk of becoming stranded amounted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

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

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

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

Figure 3
Global climate finance in the context of broader finance flows, opportunities and costs



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

50. **Significant growth in relevant initiatives has been apparent since the Paris Agreement entered into force, particularly in coalitions fostering collective commitments on climate action**. Activities relevant to Article 2, paragraph 1(c), in many

instances, are found in practices, coalitions and initiatives that predate the Paris Agreement. Policy and regulatory measures on green finance have been recorded since 1980, although there has been a marked increase in such measures since the adoption of the Paris Agreement (see figure 4). This historical context is relevant as it provides evidence that even prior to adoption of the Paris Agreement, actors were developing sustainability- and climate-related financial instruments and regulations which represent foundations for action relevant to Article 2, paragraph 1(c), that is also integrated with national development goals. For example:

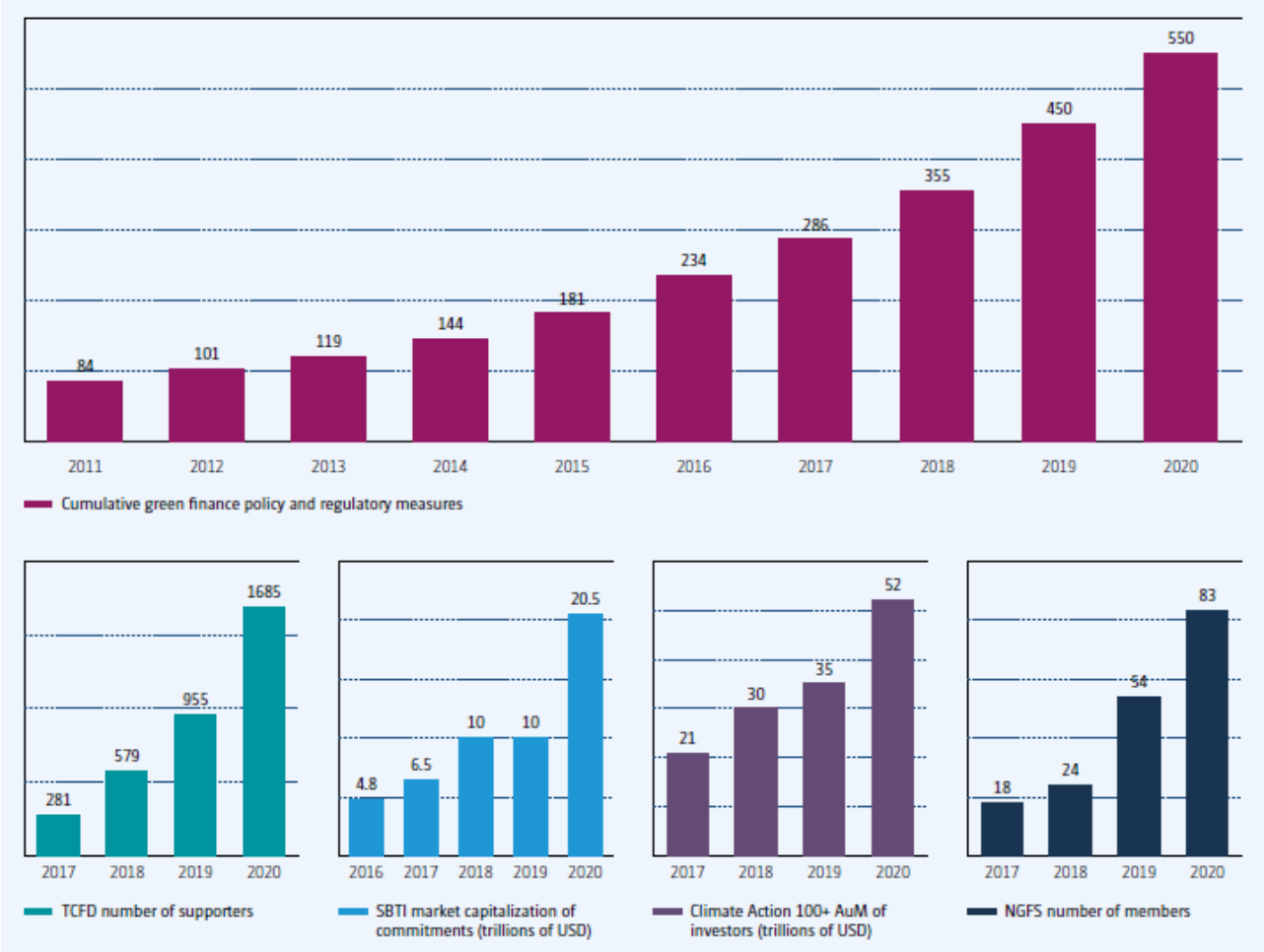
(a) 34 of 103 stock exchanges have sustainable bond-listing processes;

(b) Investors managing USD 90 trillion have signed on to the Principles for Responsible Investment;

(c) 53 banks, representing over USD 37 trillion in assets, which represent one fourth of global banking assets, have pledged to align their lending and investment portfolios with net zero emissions by 2050, as part of the Net Zero Banking Alliance;

(d) Over 40 institutional investors with USD 6.6 trillion in assets have pledged to align portfolios with net zero emissions by 2050, as part of the Net-Zero Asset Owner Alliance.

Figure 4
Number of green finance policy and regulatory measures, and growth of selected initiatives since the adoption of the Paris Agreement



51. However, the Paris Agreement triggered a focusing of action whereby existing sustainability and climate-related finance initiatives sought to adopt objectives or activities that matched those of the Paris Agreement goals. At least 115 sustainability- or climate-related financial initiatives exist that claim to be either directly or indirectly associated with

contributing to the goals of the Paris Agreement. The majority relate to promoting new financial instruments that address funding needs for sustainable development and climate change. A smaller pool of approximately 31 initiatives are focused on greening financial systems – for example, the TCFD, the European Union High Level Expert Group on Sustainable Finance and the NGFS.

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

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

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

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

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

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

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

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

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

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

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

(a) In public policy and finance, promoting opportunities to make sustainable recovery packages consistent with the goals of the Paris Agreement in the short term and setting in place financial policies and regulations for achieving net zero commitments in the long term;

(b) Ensuring that just transition financing is incorporated into approaches to align action with the goals of the Paris Agreement or into classifications of consistency with those goals, including in supporting vulnerable developing countries at risk of climate impacts in gaining access to capital to support their climate-resilient development, and in supporting the shift of trade flows away from economic activities that are inconsistent with those goals;

(c) Further clarifying the differences or complementarities between climate finance related to Article 9 of the Paris Agreement and the long-term goal under Article 2, paragraph 1(c).

Annex II*

Executive summary of the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement

[English only]

I. Introduction

1. The first NDR[1] provides an overview of qualitative and quantitative information based on available data and evidence from reports at the national, regional and global level. As such, the first NDR does not constitute an assessment of the needs of developing country Parties: the numbers of reported and costed needs are higher in the reports of some countries than of others. This does not imply that the latter have no or fewer needs; rather, this may be due to the lack of available data, tools and capacity for determining and costing needs.

II. Context and mandate

2. COP 24 requested the SCF to prepare, every four years, an NDR for consideration by the COP, starting at COP 26, and the CMA, starting at CMA 3. The COP also requested the SCF to collaborate, as appropriate, with the operating entities of the Financial Mechanism, the subsidiary and constituted bodies, multilateral and bilateral channels, and observer organizations.[2]

3. COP 25 and CMA 2 encouraged the SCF to present, to the extent possible, disaggregated information in relation to, inter alia, mapping data availability and gaps by sector, assessing climate finance flows and presenting information on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement.[3] COP 25 and CMA 2 also encouraged the SCF, in implementing its strategic outreach plan, to build on existing efforts to reach out to developing country Parties and relevant developing country stakeholders when generating data and information for the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement.[4]

III. Scope and approach

A. Scope

4. The first NDR presents quantitative information (hereinafter referred to as costed needs) and qualitative information (hereinafter referred to as needs) on the needs of developing country Parties. Quantitative information was compiled from costed needs at the project level and those derived from economic modelling in reports at the national, regional and global level and other sources. Qualitative information was derived from descriptions of planned activities, strategic directions, national priorities and action plans in the same sources.

5. To the extent possible and on the basis of the available information, the first NDR contains an analysis and presentation of the needs of developing country Parties by time frame, geographical region, thematic area, means of implementation, and sector and

* For a list of acronyms and abbreviations, see document FCCC/CP/2021/10/Add.2−FCCC/PA/CMA/2021/7/Add.2.

[1] Available at https://unfccc.int/documents/307595.

[2] Decision 4/CP.24, paras. 13–14.

[3] Decisions 11/CP.25, para. 9; and 5/CMA.2, para. 9.

[4] Decisions 11/CP.25, para. 12; and 5/CMA.2, para. 12.

subsector (chap. 2). The report reflects information and data on needs as mentioned in the national, regional and global reports. The needs are dynamically changing and may depend on different factors, such as temperature scenarios, mitigation pathways and adaptive capacity, extreme weather events, adverse effects of trade and economic barriers, and social factors such as poverty.

6. Further, the first NDR illustrates processes and approaches for determining needs (chap. 3). It also maps out available tools and methodologies for determining and prioritizing needs, including sector-specific methodologies and tools, and advantages of and challenges in applying them (chap. 4). Finally, the report highlights opportunities, challenges and gaps in relation to determining needs (chap. 5).

7. The first NDR comprises an executive summary and a technical report. The executive summary was prepared by the SCF, whereas the technical report was prepared by experts under the guidance of the SCF but remains a product of the external experts. The technical report has benefited from extensive inputs from Parties and stakeholders.

B. Sources of information

8. The first NDR has been compiled from reports prepared by developing country Parties, specifically those submitted to the UNFCCC, and reports developed by regional and global institutions. Such national reports include ACs, BURs, LEDS, NAPs, NAPAs, NCs, NDCs, TAPs and TNAs.

9. Further sources of information are the submissions received from Parties and non-Party stakeholders in response to the call for evidence issued by the SCF.[5]

C. Approach

10. The technical work comprised a review of literature and sources of available information and data, and quantitative and qualitative data collection and analysis, complemented by outreach activities. Data and information were systematically collected by the technical team under the guidance of the SCF co-facilitators for the first NDR.

11. The SCF periodically considered the outputs of the technical team and the input derived from regional meetings, and provided guidance on the development of the first NDR, including during conference calls and in-person meetings.

12. In preparing the first NDR, the technical team noted data inconsistencies, gaps and interpretation challenges, as referred to in paragraph 59 below. Efforts were made to overcome these challenges, such as identifying reporting overlaps on the basis of the reporting guidelines and avoiding double counting in aggregating and presenting the data.

IV. Key findings

A. Overview of the needs of developing country Parties

1. Information and data from national reports

13. National reports submitted by developing country Parties as part of the UNFCCC process contain information on their needs related to implementing the Convention and the Paris Agreement. There are nine types of national report, which serve different purposes under the Convention and the Paris Agreement, with reported needs varying in terms of

[5] See https://unfccc.int/documents/231567. The deadline of the call for evidence was extended to 30 October 2020, by which 34 submissions had been received. All submissions are available at https://unfccc.int/topics/climate-finance/workstreams/needs-report/repository-of-information-on-the-needs-of-developing-country-parties.

thematic and sectoral coverage, time frame and granularity of detail. In total, 563 documents were included in the analysis for the first NDR.[6]

14. Figure 1 provides an overview of the articulation of the needs of developing country Parties, including overall costed needs, across the nine types of national report submitted by developing country Parties to the UNFCCC.[7] The overall costed needs by type of report are based on the information on activities with associated costs included in the corresponding individual national reports. The needs included in national reports are identified using a top-down approach (i.e. needs that are typically estimated using economy-wide or sectoral modelling techniques) or a bottom-up approach (i.e. needs that are typically identified from a project pipeline). Developing country Parties periodically update their national reports submitted to the UNFCCC, reflecting changing circumstances and improvements in their data-collection processes and analysis. Therefore, data and information on needs may not be exhaustive as the needs are dynamically changing.

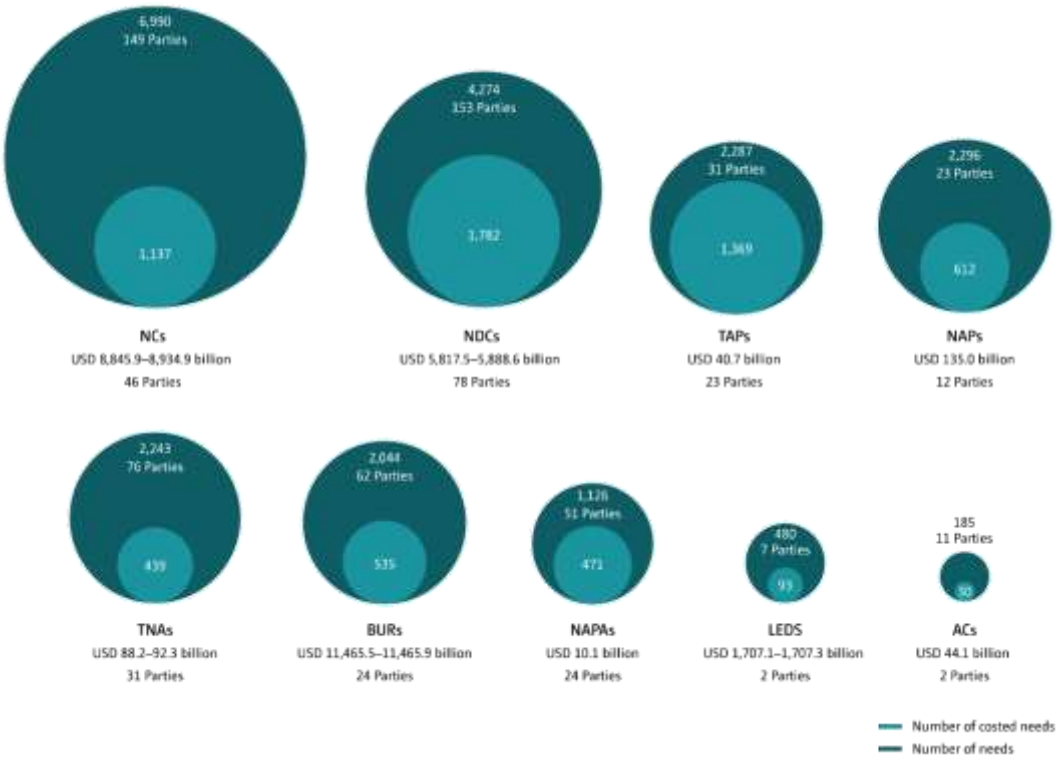
(a) Insights from quantitative data on needs

15. The needs identified and articulated by developing country Parties across the nine types of national report encompass a wide range of financial, technology development and transfer, and capacity-building needs. The level of detail in the information provided varies in terms of the description of needs and their associated costs, if specified. While some Parties express costed needs for adaptation or mitigation purposes, other communicate needs at the activity or sector level.

[6] Only the most recent submissions to the UNFCCC were used in the analysis as Parties regularly update information on their needs to reflect changing circumstances. To avoid double counting where Parties may have provided the same information in different reports (e.g. BURs and NDCs), each type of report is treated separately, without aggregation across them.

[7] Needs are catalogued in the analysis at the most granular level at which information was provided (i.e. a project or activity expressed as a need by a developing country is counted as a single activity; if activity-level information was not provided, needs are counted at the sector level; if sector-level information was not provided, needs are counted at the thematic level, etc.). Depending on the nature of the report, it is possible that the priorities and programmes consist of multiple projects and action items. See chap. 1 of the first NDR for details on the scope of the quantitative and qualitative information collected from national reports.

Figure 1
Overview of articulation of needs, including costed needs, by type of national report submitted to the UNFCCC



Note: Ranges of costs included where available.

16. As at 31 May 2021, NDCs from 153 Parties included 4,274 needs, with 1,782 costed needs identified across 78 NDCs, cumulatively amounting to USD 5.8–5.9 trillion up until 2030. Of this amount, USD 502 billion is identified as needs requiring international sources of finance and USD 112 billion as sourced from domestic finance. For 89 per cent of the costed needs, information was not provided on possible sources of finance. Among the national reports, NCs from 149 Parties present the highest number (6,990) of identified needs, of which 1,137 costed needs cumulatively amount to USD 8.8–8.9 trillion, with 5 per cent of the costed needs distributed across 45 NCs and 95 per cent in 1 NC. BURs from 62 Parties indicated 2,044 needs, of which 535 needs are costed, cumulatively amounting to USD 11.5 trillion, with 5 per cent distributed across 60 BURs and 95 per cent across 2 BURs, thereby representing the highest amount of costed needs identified across the nine types of national report. These figures should be viewed in the light of the size and nature of developing country Parties' economies and the scale of climate impacts.

(i) Thematic distribution of costed needs

Table 1
Overview of sources of reported costed needs of developing countries by type of national report submitted to the UNFCCC

	Costed needs (USD billion)				
Report	*Total*	*Mitigation*	*Adaptation*	*Cross-cutting*	*Other*
AC	44.10 (100%)	–	44.10 (100%)	–	–
BUR	11,465.53–11,465.90 (100%)	5,286.94–5,287.31 (46%)	3 628.81 (32%)	2,550.01 (22%)	–
LEDS	1,707.15–1,707.35 (100%)	1,407.15–1,407.34 (82%)	300.00 (18%)	–	–

NAP	135.02–135.03 (100%)	–	135.02 (100%)	–	–
NAPA	10.05 (100%)	–	10.05 (100%)	–	–
NC	8,845.85–8 934.94 (100%)	5,019.30– 5,033.83 (56–57%)	3,812.06– 3,882.07 (43%)	2.23 (>0%)	12.25–16.81 (>0%)
NDC	5,817.48– 5,888.56 (100%)	2,156.05– 2,156.13 (37%)	764.24–835.24 (13–14%)	2,893.39 (49–50%)	3.81 (>0%)
TAP	40.74 (100%)	21.97 (54%)	18.76 (46%)	–	0.01 (>0%)
TNA	88.24–92.33 (100%)	30.33–34.33 (34–37%)	57.9–57.98 (63–68%)	0.01 (>0%)	–

Notes: (1) Ranges of costs included where available. (2) The percentages given are the percentages of the type of costed need for each report type.

17. As shown in table 1, cumulatively, identified costed mitigation needs tend to be larger than costed adaptation needs across the reports that cover all thematic areas such as BURs, NCs and NDCs. The overall amount of costed adaptation needs is comparable to the overall amount of costed mitigation needs expressed in NCs (43 and 56–57 per cent, respectively). In the case of NDCs, the overall identified costed mitigation and adaptation needs (50 per cent) are comparable to the amount of costed cross-cutting needs (50 per cent), noting that the costed needs expressed as cross-cutting are largely a reflection of one NDC. Although some developing countries provided information on costed needs for mitigation and adaptation by sector and subsector, this information was not provided across all reports. Therefore, it was not possible to provide a comprehensive and accurate overall amount of costed needs by sector and subsector in the first NDR.

18. Although developing country Parties identified more adaptation than mitigation needs, more costs were identified for the latter. This may not imply that mitigation needs are greater, but rather be due to lack of available data, tools and capacity for assessing adaptation needs (see the information on challenges and gaps in paras. 61–66 below).

(ii) Regional distribution of costed needs

Table 2
Number and cost of needs expressed in nationally determined contributions by region

Region	*Number of expressed needs*	*Number of expressed needs with financial information (i.e. costed needs)*	*Costed needs based on available financial information (USD billion)*
African States	1,529	874	2,459.56–2,460.56
Asia-Pacific States	1,677	630	3,180.39–3,250.39
Eastern European States	282	112	9.36
Latin American and Caribbean States	771	166	168.18–168.26
Western European and other States	15	–	–

Note: Ranges of costs included where available.

19. Available information related to costed needs varies across regions (see table 2). African countries included 1,529 needs in their NDCs, of which 874 were costed, amounting to USD 2.5 trillion. NDCs of countries in the Asia-Pacific region included 1,677 needs, of which 630 needs were costed, cumulatively amounting to USD 3.2–3.3 trillion. Of the 771 needs expressed in the NDCs of countries in the Latin America and Caribbean region, 166 NDCs included costed needs, cumulatively amounting to USD 168.2–168.3 billion, of which almost 60 per cent was in one NDC. NDCs of developing countries from the Eastern European region included 282 needs, of which 112 were costed, cumulatively amounting to USD 9.36 billion.

20. Some Parties reported information on potential needs related to averting, minimizing and addressing loss and damage, either through specific adaptation activities that include objectives related to averting, minimizing and addressing loss and damage; referenced damage incurred owing to recent climate-related events such as droughts and severe weather; or modelled potential future impacts of climate on GDP or economic losses in a given year (e.g. 2030 or 2050). The information was also reported in the context of national circumstances, climate impacts and/or needs depending on the reporting Party.

21. As noted in paragraph 5 above, needs expressed in national reports are dynamically changing and, therefore, data and information thereon may not be exhaustive. While the number of needs and costed needs communicated in national reports is lower for some regions than others, this does not mean that those regions have no or fewer needs. Rather, this may be due to lack of available data, tools and capacity for determining and costing needs. Therefore, the number of needs and costed needs compiled from national reports available at the time of preparation of the first NDR should not be used to draw comparisons of the actual needs across regions.

(b) Insights from qualitative data on needs

Figure 2
Needs expressed by developing countries in national reports by theme, region and means of implementation

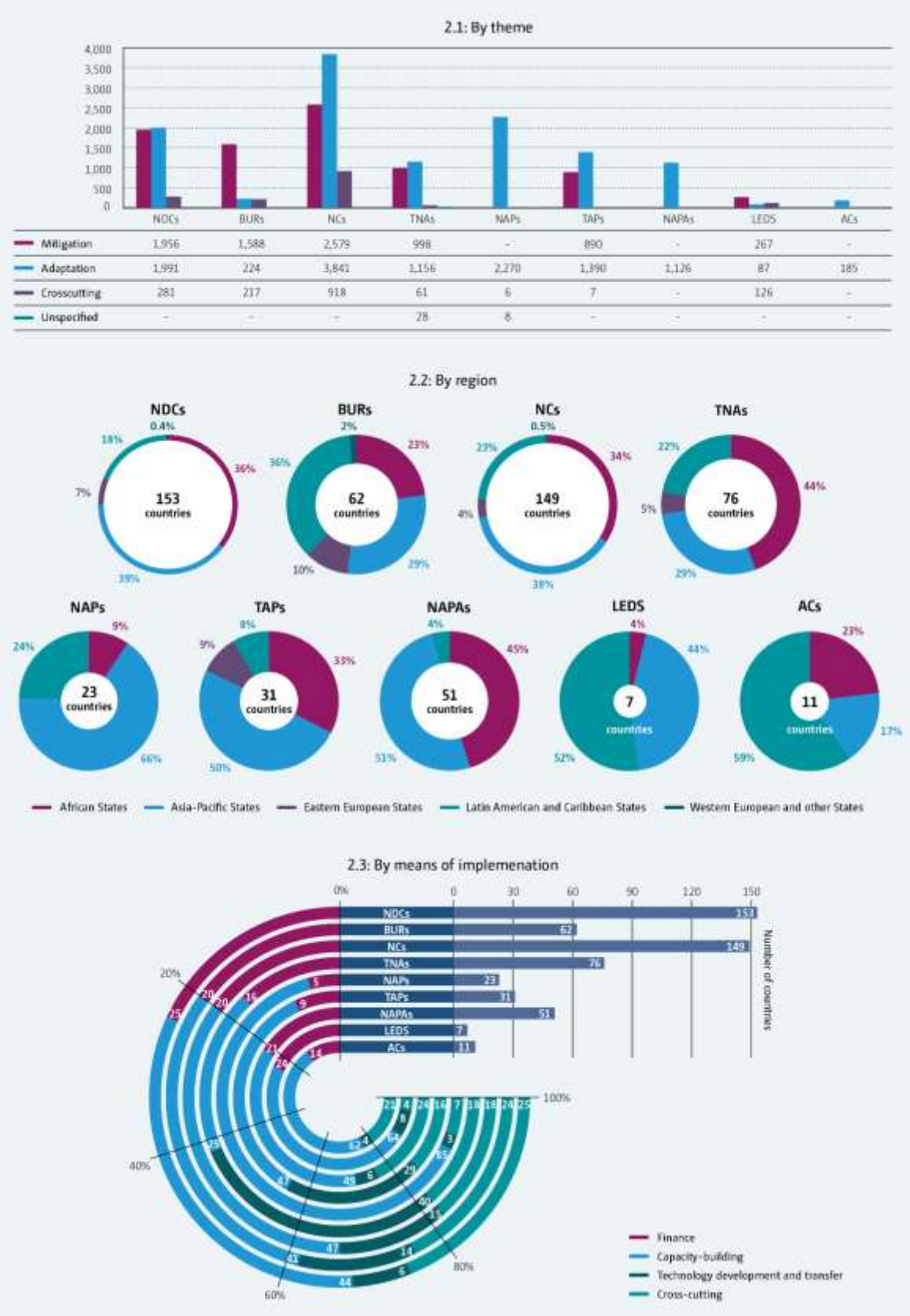
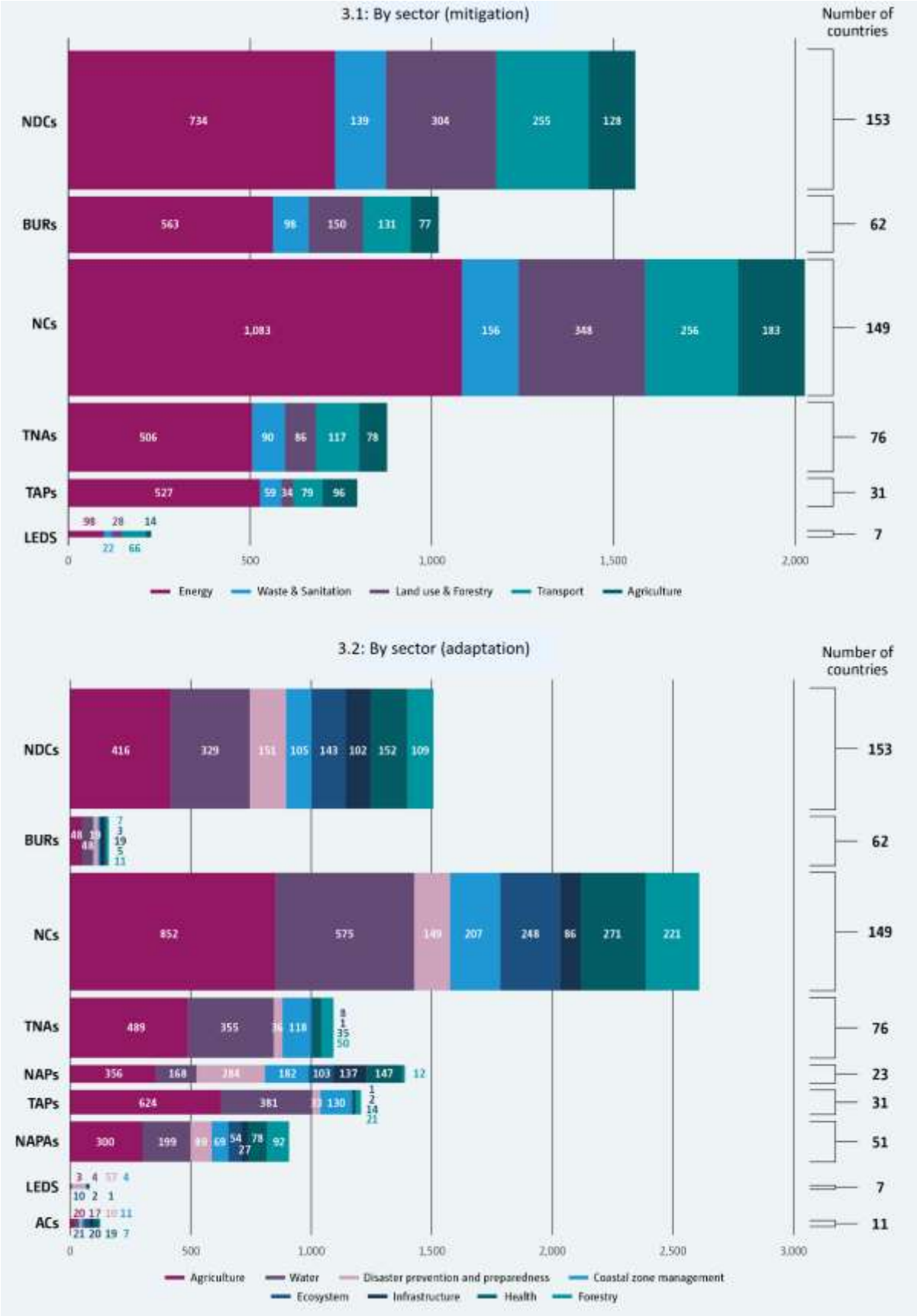


Figure 3
Needs expressed by developing countries in national reports by sector



(i) Thematic distribution

22. Overall, needs related to adaptation are mentioned more often than those related to mitigation in all report types except BURs and LEDS, indicating greater attention to supporting developing countries' expressed adaptation needs. For example, as shown in figure 2, NDCs included 1,991 needs for adaptation and 1,956 for mitigation.

(ii) Regional distribution

23. When the number of expressed needs across the nine national report types is considered, developing country Parties in the Africa and Asia-Pacific regions identified comparable numbers of needs across the national reports with broad thematic and sectoral coverage such as BURs, NCs and NDCs, comparable with the Latin America and Caribbean region only in the case of BURs (see figure 2, section 2.2). Developing country Parties in the Asia-Pacific region used NAPs and TAPs to further specify adaptation needs, as more than half of the needs identified in NAPs and TAPs were from this region. Developing country Parties in the Latin America and Caribbean, and Eastern European regions expressed more needs in their NCs than in other national reports. Latin American and Caribbean Parties expressed a considerable number of adaptation needs in adaptation-specific national reports (e.g. ACs and NAPs) when compared with the overall number of needs expressed in their BURs and NDCs. Developing country Parties in the African region expressed more needs through TNAs compared with other regions, reporting 993 needs compared with the 642 needs identified by Parties in the Asia-Pacific region.

(iii) Distribution by means of implementation

24. Qualitative data show a significant prevalence of capacity-building and technology development and transfer needs, which may in part be due to the resources developing countries can access to support the identification of these needs. The number of capacity-building needs is higher than finance needs and technology development and transfer needs identified in the nine national report types except for TNAs (see figure 2, section 2.3). Capacity-building needs expressed across the national reports typically cover areas such as research, training and education, awareness-raising, institutional strengthening and coordination, and policy development.

(iv) Sectoral and subsectoral distribution

25. On the basis of the number of mitigation needs expressed across the nine national report types, energy is the lead sector for climate change mitigation actions, followed by land use and forestry, transport, agriculture, and waste and sanitation (see figure 3, section 3.1).

26. When considering mitigation needs by sector and subsector, the nine types of national report show that most needs in the **energy sector** relate to requests for support for the energy efficiency and renewable energy subsectors, albeit with some variation between them. In NDCs, needs for renewable energy development were identified almost twice as frequently as those for energy efficiency (399 and 261, respectively) but the total nominal value of energy efficiency projects was 1.5 times larger than that of renewable energy projects (USD 377.22 billion and USD 198.08 billion, respectively). In BURs and NCs, more needs related to renewable energy than to energy efficiency were identified. TNAs included a larger variation among energy subsectors, including the development of natural gas, the phasing-out of inefficient fossil fuel subsidies, the exploration of carbon capture and storage, and the development of the efficient use of coal.

27. The majority of expressed mitigation needs in the **land-use and forestry sector** represented a few densely forested countries, such as Bhutan, Brazil, the Congo, Costa Rica, Ghana, Guyana, the Lao People's Democratic Republic, Malaysia, Papua New Guinea, Suriname, the United Republic of Tanzania and Viet Nam. This sector covers key activities such as reforestation, forest fire prevention, social forestry development, sustainable forest management, development of sustainable supply chains for forest commodities, spatial planning forestry research and some land-use activities, such as management of livestock. Data in NCs and NDCs showed that, within this sector, needs related to reforestation are the largest needs expressed in financial terms.

28. On the basis of the number of adaptation-related needs expressed across the nine national report types, agriculture and water are the two lead sectors for climate change

adaptation actions, followed by disaster prevention and preparedness, coastal zone management and health (see figure 3, section 3.2).

29. Adaptation needs in the **agriculture sector** cover a wide variety of land uses that overlap with other key sectors. Needs related to agroforestry and irrigation, for example, also touch on areas or land managed under the forestry and water sectors. Needs related to the agriculture sector relate to crop diversification, development of resistant crops, land and soil management, livestock management, and fisheries and aquaculture.

30. Adaptation needs in the **water sector** are dominated by the need for water distribution infrastructure, water harvesting and irrigation. Other types of need in this sector vary widely and cover water resource management, water storage and water sanitation. In NDCs, about 38 per cent of expressed needs in the water sector include financial information. Water distribution infrastructure, including wastewater treatment, was the largest need in financial terms across all types of report.

(c) Other areas of needs

31. Developing country Parties also communicate other areas of needs that involve issues such as gender, indigenous peoples and vulnerable groups. However, across the nine national report types, less than 10 per cent of needed activities referred to gender or specific communities. Where these topics are included in national reports, information tends to relate to commitments, policies and/or strategies.

32. Some reports that expressed needs for policy development were linked to the SDGs and the Addis Ababa Action Agenda. In general, the implementation of climate actions is mainstreamed in SDG-related actions. However, a few reports expressed needs focusing on institution-building and policy development, aiming to link climate commitments with the SDGs; for example, Jordan's need to align its intended nationally determined contribution with the SDGs, and Morocco's needs (expressed in its NCs) to strengthen the National Institutional Framework of Climate Change through a regulatory system based on the Framework Law on the National Charter for Environment and Sustainable Development.

2. Information and data from reports by regional and global actors

33. Information and data on the needs of developing countries are also available from regional and global reports. For the mitigation needs of developing countries, these reports use a mix of climate economic modelling for scenarios of below 2 °C, ranging from USD 2.4 trillion to USD 4.7 trillion in annual energy-related investment needs globally;[8] investment opportunities based on stated national plans and targets including and beyond NDCs, ranging from USD 23.8–29.4 trillion for emerging markets from 2016 to 2030;[9] and investment estimates for achieving conditional NDC targets using carbon prices, for example USD 715 billion in Africa[10] (see figure 4 for an example of energy investment needs identified by the International Renewable Energy Agency[11]).

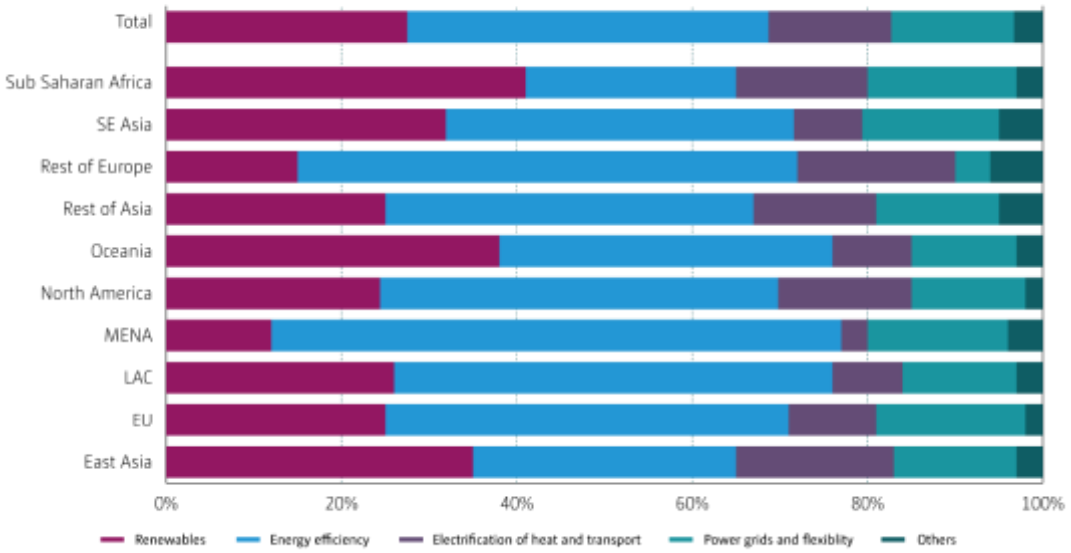
[8] See Collum DL, Zhou W, Bertram C, et al. 2018. Energy investment needs for fulfilling the Paris Agreement and achieving the Sustainable Development Goals. *Nature Energy*. 3(7): pp.589–599. International Energy Agency. 2020. *World Energy Model Documentation*. Paris: IEA. Available at https://iea.blob.core.windows.net/assets/bc4936dc-73f1-47c3-8064-0784ae6f85a3/WEM_Documentation_WEO2020.pdf; and International Renewable Energy Agency. 2020. *Global Renewables Outlook. Energy transformation 2050*. Abu Dhabi: International Renewable Energy Agency. Available at https://www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020.

[9] International Finance Corporation. 2017. *Climate Investment Opportunities in South Asia. An IFC Analysis*. Washington, D.C.: International Finance Corporation. Available at https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/resources/final+climate+investment+opportunities+in+south+asia+-+an+ifc+analysis.

[10] African Development Bank. 2021. *Needs of African Countries Related to Implementing the UN Framework Convention on Climate Change and the Paris Agreement*. Available at https://unfccc.int/sites/default/files/resource/Needs%20Report_African%20counties_AfDB_FINAL.pdf.

[11] For the purpose of the first NDR, various data sources were used to illustrate needs of developing country Parties, without prejudice to the meaning of this term in the context of the Convention and the Paris Agreement, including but not limited to Parties not included in Annex I to the Convention and other classifications used in regional and global reports.

Figure 4
Shares of annual average clean energy investments in the International Renewable Energy Agency transforming energy scenario, by region, 2016–2050



Source: International Renewable Energy Agency. 2019. *Transforming the energy system – and holding the line on rising global temperatures*. Abu Dhabi: International Renewable Energy Agency. Available at www.irena.org/publications/2019/Sep/Transforming-the-energy-system.

34. Reports based on energy–economy models note that developing country regions have the largest investment gaps compared with historical trends to achieving climate scenarios in line with the Paris Agreement. Three to fourfold increases of investment are necessary in both renewable energy and energy efficiency across many regions that include developing countries.

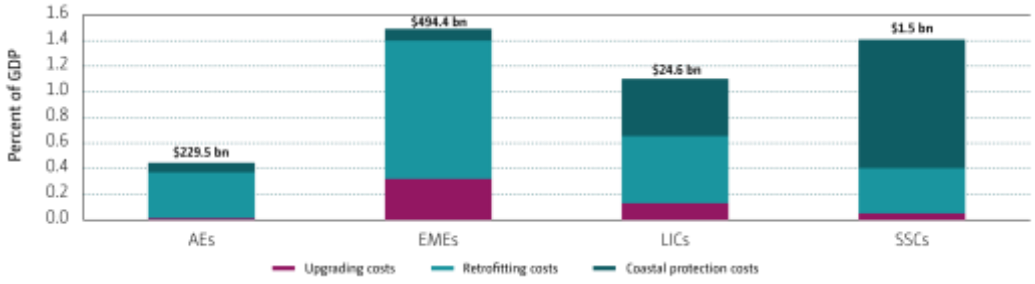
35. Regional and global reports also provide estimates related to adaptation and resilience. Costs based on bottom-up national and sector-based studies (ranging from USD 140 billion to USD 300 billion annually by 2030) measuring impacts to GDP (for example, ranging from USD 289.2 billion to USD 440.5 billion up to 2030 in Africa) and the incremental investment needed to upgrade or retrofit infrastructure stock (ranging from USD 11 billion to USD 670 billion in annual incremental costs) are most prevalent.

36. To make current and future infrastructure climate-resilient, annual costs as a percentage of GDP are at least double in countries with emerging market economies, low-income countries and small States compared with the costs in high-income countries, that is 1.1–1.49 per cent compared with 0.45 per cent. Investment needs expressed as a percentage of GDP for upgrading new infrastructure and coastal protection are proportionally greater in lower-income countries and small States, while retrofitting existing infrastructure is the major cost component in countries with emerging market economies. However, the reports also noted that specific knowledge on the degree of exposure of infrastructure to natural hazards, related to their location, intensity and level of risk, could affect the incremental cost of making infrastructure climate-resilient (e.g. 3 per cent of total investment as opposed to 8–45 per cent) (see figure 5).[12]

[12] As footnote 11 above.

Figure 5

Public investment needs for resilience of physical infrastructure, by country grouping (gross domestic product weighted average)



Source: International Monetary Fund. 2020. *Fiscal Monitor. Policies for the Recovery*. Washington, D.C.: International Monetary Fund.

37. The information and data generated from the national, regional and global reports cannot be compared with each other as the reports have different time frames, objectives and scopes. However, all of the reports may be viewed as complementary in offering different insights, granularity and processes and approaches for identifying needs.

B. Processes and approaches for determination of needs of developing country Parties

1. National institutional arrangements

38. Developing country Parties have varied institutional arrangements for identifying climate change needs, which are described in most of their national reports submitted to the UNFCCC. Most countries have established specialized institutions within their ministries and departments whose mandate is to spearhead climate change actions. These institutions have various names such as climate change directorate, climate change unit, interministerial climate change coordination committee, climate change technical working group and climate research centre.

39. Good practice in ensuring buy-in and effective coordination of the needs identification process is the engagement of high-level decision-making government offices at the initial stage of the climate change needs identification process. In addition, the engagement of other stakeholders and the assignment of specific roles and responsibilities to participants representing various sectors and interest groups at both the national and subnational level was noted in the reports of the majority of developing countries.

40. Institutional arrangements for needs determination vary widely across countries. However, in most countries the ministry responsible for environmental affairs coordinates the process through a focal point or a committee.

41. The focal point leads the needs identification process and can adopt varying arrangements for stakeholder consultation. The stakeholder consultation process leads to determining the institutional arrangements for the needs identification process. Some of the most common institutional arrangements include focal point only, focal point with other ministries and an interministerial committee. Among these, the interministerial committee is the most inclusive and likely to provide more detailed information on needs across sectors.

2. Needs identification process

42. The needs identification process of most countries starts with consultations between the lead ministry and the country's leadership. This ensures country ownership and top-level support in the needs identification process (see figure 6).

Figure 6
Common steps adopted by countries' committees or units for identifying climate change needs

43. Stakeholder consultations are an integral part of the needs identification process. During the initial phase, background information is collected and assessments are carried out to help scope the needs. The stakeholders consulted are mainly from government line ministries, though in some instances they include non-governmental organizations and the private sector. Local communities are the least consulted stakeholders during the process.

44. In most of the national reports, the description of the needs identification process does not explicitly mention inclusivity aspects. Needs related to gender and local communities are captured in some reports emanating from those processes. However, where the needs identification process has projects and programmes as part of its output, gender and other inclusivity aspects of various stakeholders were mostly elaborated in the project or programme documents.

3. Processes and approaches used by other actors, namely multilateral climate funds, multilateral development banks and United Nations agencies

45. MDBs and United Nations agencies play a critical role in supporting developing countries in their needs identification process. In most cases, these agencies use experts during country-driven needs identification consultation forums to provide insights and share data that may help developing countries better identify and report their needs.

46. In other instances, MDBs and United Nations agencies provide financial and technical support for developing countries in the needs identification process. This support is used to carry out in-depth sectoral analysis to identify pathways within these sectors where considerable effort is needed and where greater impacts can be achieved. For countries that have benefited from this support for their second NDCs, their reports provide more granular information on needs, including by sector, compared with their first NDCs.

47. The multilateral climate funds established under the Convention, namely the GEF, including the special climate funds managed by the GEF (the Special Climate Change Fund and the Least Developed Countries Fund), the Green Climate Fund and the Adaptation Fund, also play a critical role in providing financial support for countries in facilitating their climate change needs identification process. This is particularly evident in the case of the Green Climate Fund and Adaptation Fund readiness support and the GEF Capacity-building Initiative for Transparency Trust Fund, which enable countries to identify and prioritize their climate change needs.

C. Methodologies and underlying assumptions used in determining the needs of developing country Parties

1. Methodologies used at the national level by developing countries in national reports

48. Developing country Parties identify adaptation and mitigation needs in preparing their national reports, following UNFCCC reporting guidelines and guidance and, in some cases, other methodologies adapted to their national context. The approaches taken vary depending on institutional and human capacities, cost, geography, time frame and data availability.

49. Although recent national reports include more information about methodologies used to determine adaptation needs, overall, there is still more information about the methodologies used to determine mitigation needs than for adaptation needs. The types of methodology applied vary. Most methodologies used to identify mitigation needs are quantitative, while a lower number of qualitative methodologies are used to identify adaptation needs. However, in recent reports, some countries have used methodologies to identify both mitigation and adaptation needs.

50. Countries in the Africa, Asia-Pacific, and Latin America and Caribbean regions present region-level information about methodologies applied to determine mitigation needs. Countries in the Africa and Asia-Pacific regions also present information about methodologies used to determine adaptation needs.

51. UNFCCC reporting guidelines and guidance, such as those provided for TNA preparation, have facilitated identification of needs for technology transfer and capacity-building related to mitigation and adaptation actions through methodologies such as the TNA methodology and the guidance for preparing a TAP.[13] However, the existing reporting guidelines and guidance do not include specific provisions on how to assess these needs at the local level. As such, countries assess their needs on the basis of methodologies developed for application at the national or international level.

52. Methodologies used by developing countries to determine mitigation needs include both top-down and bottom-up models for the energy and non-energy sectors. Bottom-up models are suited for studying options that have specific sectoral and technological implications. Top-down models are useful for studying broad macroeconomic and fiscal policies for mitigation, such as carbon or other environmental taxes. Methodologies applied to identify mitigation needs mainly focus on the cross-cutting, energy, greenhouse gas inventory preparation, waste, transport, agriculture, forestry, building and industry sectors.

53. Methodologies used by developing countries to determine adaptation needs mostly include vulnerability assessments that determine the levels of risk and vulnerability for each sector. These methodologies mainly focus on the agriculture, ecosystem and biodiversity, water and cross-cutting sectors.

2. Methodologies used at the regional and global level

54. For international and regional reports, top-down methodologies have been developed and applied to identify finance, technology development and transfer, and capacity-building needs. Such reports have provided alternative methodologies to developing countries that have been adapted to national circumstances and contexts and used to determine national needs.

D. Challenges, opportunities and gaps in determining the needs of developing country Parties

1. Opportunities

55. There are several regional and global specialized institutions that can support countries in their needs identification process by providing expertise and data. Some of these institutions are United Nations agencies, to which countries have quick and easy access and which can be engaged with during the needs identification process to provide the required support.

56. A number of platforms have been established by various institutions, including United Nations agencies and MDBs. These platforms offer a good opportunity for developing countries to share their experience and good practices in the needs identification process. Most developing countries are already using these platforms to share their experience.

57. Several initiatives have been established that can help in the needs identification process. These initiatives include the establishment of emissions inventories, which provide

[13] Technology Executive Committee. 2020. *Enhancing implementation of the results of technology needs assessments*. Bonn: UNFCCC. Available at https://unfccc.int/ttclear/tec/brief13.html.

some of the data and information that can facilitate the prioritization of sectors and activities as part of the country's climate change needs identification process.

2. Challenges

(a) Challenges experienced in the preparation of the report

58. In compiling the needs of developing country Parties from the various sources, efforts were made by the technical team to overcome challenges such as identifying reporting overlaps so as to avoid double counting in aggregating and presenting the data.

59. Nevertheless, the following challenges were encountered in collecting, categorizing, aggregating and presenting the data on needs:

(a) **Data inconsistencies**: the classification of sectors and subsectors is not uniform across data sources, including in different sources of information and reports submitted by the same Party. This increases the risk of double counting, as cost estimates may be given in one report by sector and in another report by activity, so the same activity may be captured and hence accounted for under the costs by sector. Issues related to the definitions of needs also introduce inconsistencies because needs are referred to as qualitative needs, investment needs or costs;

(b) **Data gaps**: gaps in the coverage of information on costed needs by sector or subsector pose a significant challenge. These gaps are particularly evident for adaptation needs, which, compared with cost estimates for mitigation, remain limited. Significant data gaps related to capacity-building needs remain; these are predominantly characterized in qualitative terms. Further, information on methodologies used in producing and communicating information on needs in national reports is, in many cases, not included in the reports. In addition, methodological assumptions, which in most cases are not stated, may impact the interpretation of the data. The needs are dynamically changing and may depend on different factors such as temperature scenarios, mitigation pathways and adaptive capacity, extreme weather events, adverse effects of trade and economic barriers, and social factors such as poverty. Most reports, however, provide a snapshot of a Party's needs. It should also be noted that not all Parties have submitted reports;

(c) **Data interpretation**: when collecting, analysing and aggregating data and information on the needs of developing country Parties, best efforts have been made to ensure accuracy. When collecting and analysing the amounts of needs reported by developing country Parties in their national reports, different Parties apply their respective definitions and interpretations of needs. Needs may be reported as needs or activities needed to take climate action. Furthermore, costed needs may be determined in one national report but not in the subsequent report, without stating whether the same amounts of costed needs apply.

60. The following steps were undertaken to analyse, aggregate and present the data:

(a) Analysis of data gaps and identification of areas for improvement;

(b) Harmonization of data sets used for estimating the global total needs in order to minimize misalignment between information and data according to thematic areas, regions, sectors and time frames;

(c) Presentation of quantified data in ranges of estimates where possible, instead of aggregating the amounts, to avoid possible data overlaps;

(d) Use of case studies to highlight good practices and lessons learned in determining needs.

(b) Challenges experienced by developing countries

61. Institutional coordination was highlighted as a major challenge in the needs determination process. The coordination challenge affected needs identification between sectors and between levels of governance, namely the local and national level. Two of the identified drivers of limited coordination were the lack of specialized institutions within ministries with the mandate to spearhead climate change actions, and the involvement of ministries other than the environment ministry in climate change planning in the needs identification process.

62. While most countries have used methodologies to identify and report their needs both qualitatively and quantitatively, costing these needs has been a major challenge and therefore most of these needs do not have accompanying cost estimates. This challenge is particularly evident in deriving cost estimates for climate adaptation and enhancing resilience needs, and, in this context, deriving cost estimates for averting, minimizing and addressing loss and damage needs, since developing countries' adaptation actions cannot always be included in short-term projects, but rather require long-term interventions that are difficult to estimate in monetary terms.

3. Gaps

63. Developing countries have taken significant steps to improve their needs determination process but capacity gaps within lead institutions continue to hinder progress. These capacity gaps vary widely across countries and include the lack of qualified personnel to spearhead the needs identification process and the lack of institutional-level capacity.

64. Limited availability of granular data at the sector and subsector level constitutes one of the major gaps identified by developing countries. As a result, many developing countries provide cost estimates for overall needs rather than disaggregated by theme or sector.

65. The lack of specialized national institutions to spearhead the means of implementation under the Convention, such as technology development and transfer, and capacity-building, limits the ability of some developing countries to track needs continuously and identify additional and emerging needs.

66. Limited detailed guidance on the structure and content of reports submitted to the UNFCCC resulted in needs with varying levels of detail across countries. Where such guidance was available, for instance for TNAs, the needs were identified at a higher level of detail compared with needs communicated in other national reports.

4. Insights into determining needs using available resources: country case studies and experience

67. Country case studies have shown that the needs identification process provides an opportunity for countries to translate their needs into investment opportunities and climate actions, including by using existing support mechanisms to prioritize and cost identified needs and turn needs into project ideas for support. For example, through the TNA process, some countries identified technology support needs and submitted a request for technology assistance to formulate project ideas related to technology development and transfer.

68. Costing adaptation and mitigation needs for action is becoming a crucial area of work at the national level in order to better identify gaps where financial support is needed and ways to leverage public and private resources.

5. Co-benefits related to addressing the needs of developing country Parties, such as in relation to the Sustainable Development Goals, disaster risk reduction and the Addis Ababa Action Agenda

69. For most countries, climate change needs are aligned with the targets set out in the 2030 Agenda for Sustainable Development. As the SDGs are ideally indivisible, all developing country Parties covered in this report are taking action to address SDG 13 that relates to taking action to address climate change, and SDG 13 affects all the other SDGs. Overall, the needs identified by developing countries touch on all SDGs, with 75 per cent of NDCs having linkages to SDGs 2, 6, 7, 8, 9, 11, 12, 13, 15 and 17.

70. In their national reports, some developing country Parties refer to the Addis Ababa Action Agenda provision for mobilizing and aligning local resources for climate action. This is particularly evident in countries that capture their climate action budgets under the national budgeting process.

II. Recommendations

71. The SCF invites the COP and the CMA to consider the following recommendations:

(a) *Encourage* developing country Parties and climate finance providers, as well as multilateral and financial institutions, private finance data providers and other relevant institutions, to enhance the availability of granular, country-level data on needs related to the implementation of the Convention and the Paris Agreement with a view to addressing existing data gaps;

(b) *Encourage* developing country Parties to share best practices on determining needs, including regarding the institutional capacity conducive to determining needs;

(c) *Encourage* developing country Parties to provide, where possible, information on needs related to:

(i) Gender-responsive climate action and the needs of indigenous peoples and vulnerable groups;

(ii) Preparation of national reports to the UNFCCC, including reporting on the activities contained therein;

(iii) Addressing and mitigating risks, including physical and transitional risks;

(iv) Energy poverty as it relates to sustainable development;

(v) Methodologies employed in the determination of the needs in their national reports to the UNFCCC, including, in accordance with reporting guidelines and where available, quantified data on needs;

(d) *Request* the SCF, in preparing future NDRs, to present available data and information on needs related to the recommendations referred to in paragraph 71(c) above;

(e) *Invite* the operating entities of the Financial Mechanism, United Nations agencies, multilateral and bilateral financial institutions and other relevant institutions to make use of the information contained in the first NDR when supporting developing country Parties in identifying and costing needs;

(f) *Invite* the operating entities of the Financial Mechanism to revise templates and guidance for developing countries when supporting their processes in identifying their needs with a view to enhancing availability of granular information on qualitative and quantitative needs;

(g) *Encourage* the operating entities of the Financial Mechanism, United Nations agencies, multilateral and bilateral financial institutions and other relevant institutions to make available further information on methodologies related to determining and costing needs, especially for adaptation needs and incremental costs;

(h) *Encourage* developing country Parties to consider the insights on methodologies identified in the first NDR when costing and determining needs;

(i) *Encourage* developing country Parties to take advantage of available resources through the operating entities of the Financial Mechanism, as well as other multilateral and bilateral actors, to strengthen institutional capacity for identifying and costing their needs in relation to implementing the Convention and the Paris Agreement;

(j) *Request* the SCF to engage with public and private financial institutions and to disseminate the findings of the first NDR;

(k) *Invite* UNFCCC constituted bodies, in particular the Paris Committee on Capacity-building and the Adaptation Committee, to consider the insights identified in the first NDR when implementing their respective workplans;

(l) *Encourage* Parties, multilateral and financial institutions, academia, methodology developers, research institutions and other relevant actors to continue to develop methodologies for the determination of adaptation and resilience enhancement needs and, in this context, needs related to averting, minimizing and addressing loss and damage;

(m) *Encourage* the operating entities of the Financial Mechanism, United Nations agencies, multilateral and bilateral financial institutions and other relevant institutions to provide financial and technical support to developing countries for updating the reporting of their qualitative and quantitative information and data on needs to be considered in subsequent NDRs, as appropriate;

(n) *Encourage* all actors, when determining needs for implementing the Convention and the Paris Agreement, to highlight linkages to the implementation of the 2030 Agenda for Sustainable Development and application of the Addis Ababa Action Agenda.