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Matters relating to finance
Matters relating to the Standing Committee on Finance

Report of the Standing Committee on Finance

Addendum

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

Summary

At its 35th meeting, the Standing Committee on Finance concluded work on the second report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement and its executive summary, which is contained in this document.

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Abbreviations and acronyms

adcom	adaptation communication
AR	Assessment Report of the Intergovernmental Panel on Climate Change
BUR	biennial update report
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
COP	Conference of the Parties
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
LDC	least developed country
LT-LEDS	long-term low-emission development strategy(ies)
NAP	national adaptation plan
NAPA	national adaptation programme of action
NC	national communication
NDC	nationally determined contribution
NDR	report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement
SCF	Standing Committee on Finance
SIDS	small island developing State(s)
TAP	technology action plan
TNA	technology needs assessment

I. Introduction

A. Context and mandates

1. The second NDR prepared by the SCF provides an updated overview of the needs of developing country Parties based on available information in reports at the national, regional and global level. The second NDR includes the following elements related to determining the needs of developing country Parties:

(a) Information compiled from reports at the national, regional and global level, broken down into costed and non-costed needs and by time frame, theme and sector, geography and means of implementation;

(b) Information on processes and approaches used;

(c) Information on the methodologies and underlying assumptions used;

(d) Discussion of related gaps, challenges and opportunities.

2. COP 24 requested the SCF to prepare, every four years, a report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement for consideration by the COP, starting at COP 26, and by the CMA, starting at CMA 3.[1] Following the first NDR,[2] published in 2021, the COP and the CMA provided guidance in the context of preparing the second NDR, which included continuing to reach out to developing country Parties and their stakeholders when generating data and information on needs, and considering including available data and information relevant to implementing the United Arab Emirates Framework for Global Climate Resilience.[3]

3. The second NDR comprises this executive summary, prepared by the SCF, and a technical report prepared by experts under the guidance of the SCF drawing on data and information from a range of sources.[4] The technical report was subject to extensive stakeholder input and expert review but remains a product of the external experts.

B. Scope and approach

4. The second NDR provides an updated overview of the needs of developing country Parties[5] for addressing climate change in accordance with the Convention and the Paris Agreement based on information and data available at the national, regional and global level as at 30 June 2024.

5. The main sources of information are the reports submitted by developing countries as part of the processes under the Convention and the Paris Agreement, such as adcoms, BURs, LT-LEDS, NAPs, NCs, NDCs, TAPs and TNAs. The latest submitted report of each type by each Party as at 30 June 2024 is included in the overview of needs, amounting to a total of 754 national-level reports from 154 Parties, compared with 563 national reports considered in the first NDR. Previous reports of the same report type submitted by the same Party are not considered in order to avoid double counting. For the second NDR the same approach applied for the first NDR was used to capture needs as explicitly expressed by developing country Parties through specific means of implementation (financial, technology

[1] Decision 4/CP.24, para. 13.

[2] SCF. 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.

[3] Decisions 5/CP.26, para. 19, and 9/CMA.5, para. 2.

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

[5] For the purpose of the second NDR, various data sources are 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.

development and transfer or capacity-building) or a specific activity to address the need. Where necessary, the technical team consisting of external experts and secretariat staff who developed drafts of the technical report harmonized raw data and information against the data collection framework outlined in annex B to the technical report. Due consideration was given to accurately reflecting how Parties chose to report specific needs.

6. In following the same methodological approach applied for the first NDR, the second NDR does not aggregate needs across types of report submitted by the same Party, notwithstanding that some Parties cross-reference their estimates of needs and costed needs across several reports. As a result, the needs reported by Parties across different report types have overlaps and therefore should not be aggregated.

7. The overview of the needs expressed in national reports is complemented by national-level responses to a call for evidence,[6] summary analyses of other national-level reports prepared by multilateral development banks, and regional and global reports that provide information on the needs of developing countries based on models and estimates.

8. The technical work for the second NDR comprised a literature review and a set of outreach activities. Three engagement webinars for regional stakeholders were held in April–May 2024, and 10 submissions were received in response to the call for evidence.

C. Challenges and limitations

9. A number of challenges and limitations were faced in the preparation of the second NDR associated with collecting data and information on needs as reported by developing country Parties in their national reports under the Convention and the Paris Agreement. Some key challenges and limitations are as follows:

(a) **Data interpretation**: Information on needs was not reported in standardized formats. While the guidelines for preparing some report types such as BURs and NCs include dedicated chapters on the needs for means of implementation, the guidelines for other report types, such as adcoms, LT-LEDS, NAPs and NDCs, do not have dedicated sections on this, and therefore that information is not required to be submitted by developing country Parties in those reports. According to the methodology of the second NDR, the analysis relies on how each source of information explicitly expresses the needs of developing countries, which presents challenges for the interpretation of the information reported. For these report types, some developing country Parties add a dedicated section for needs, and others include general statements or tabular information on needs interspersed throughout the report. However, the non-standardized reporting formats made it challenging to collect and interpret the data and information. Further, the approach to data collection involved analysing explicit statements of need, which can be challenging to identify in some reports. In addition, how needs change over time and whether a need reported in the latest submitted report superseded or was in addition to a need reported in the previous report of that type submitted by the same Party is often not disclosed. For this reason, the approach applied in the second NDR, as in the first NDR, is to capture the latest needs expressed by a given Party in each type of report;

(b) **Data gaps**: A significant gap in information on costed needs persists relative to the number of needs expressed, by theme and by sector. Furthermore, gaps in information exist on the processes and approaches used in determining needs as well as the methodologies and underlying assumptions used. Developing country Parties are not required to submit information on needs, and the existence of data gaps may be due to a lack of available data, tools and capacity;

[6] National-level inputs were submitted by two countries in response to the call for evidence by the SCF; although the data presented within those submissions were not integrated into the analysis of national reports, they are analysed separately in chap. 2.2 of the technical report. All submissions received in response to the call for evidence are available at https://unfccc.int/topics/climate-finance/resources/standing-committee-on-finance-info-repository#Report-on-the-determination-of-the-needs-of-developing-country-Parties-related-to-implementing-the-Convention-and-the-Paris-Agreement.

(c) **Presentation of data**: Measuring needs by the number of times they have been expressed does not capture the scale of each expression (e.g. at an activity, sector or thematic level). For costed needs, challenges relate to aggregating information without adjusting for inflation or net present value and differentiating between total and incremental costs.

10. The second NDR does not determine the needs of developing country Parties but rather provides a snapshot of the types of needs identified across the various sources of information and processes. Given the significant gaps and limitations in data and information availability and the wide range of needs assessment methodologies with different levels of granularity applied, the NDR does not represent a comprehensive and exhaustive presentation of needs but rather captures the needs as reported by developing country Parties in the sources of information considered.

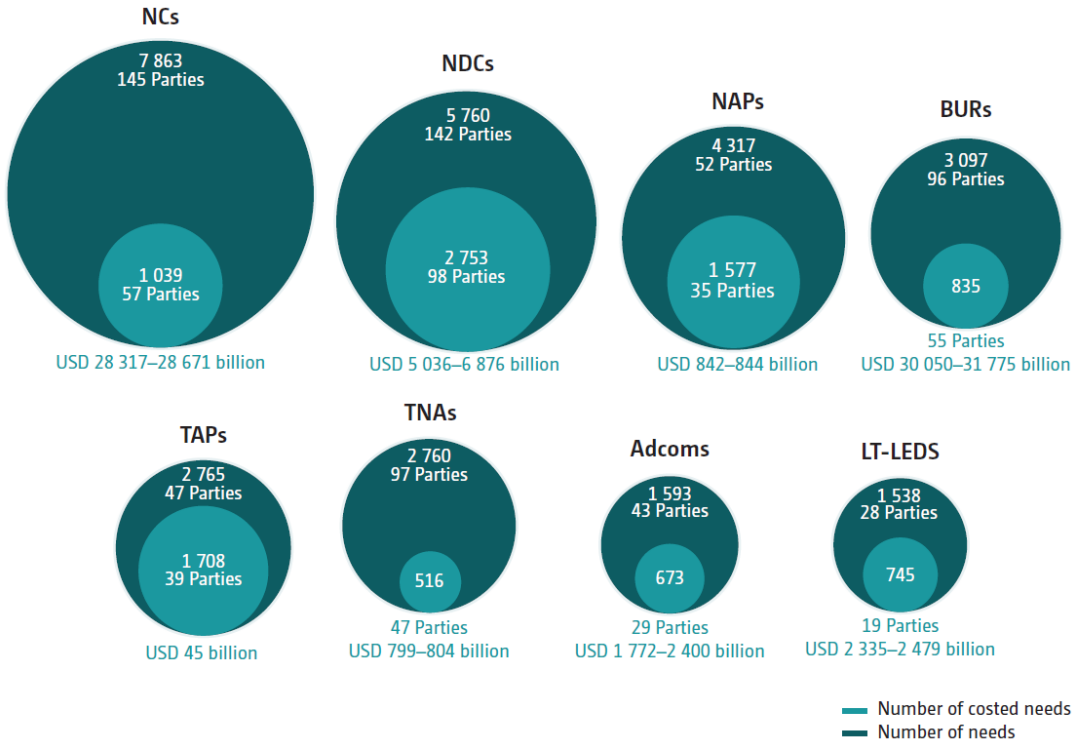
II. Key findings

A. Overview of the information and data on needs of developing country Parties from national reports

1. Needs expressed and costed needs

11. As noted in the first NDR, the needs articulated by developing country Parties encompass a range of financial, technology development and transfer, and capacity-building needs.[7] 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 expressed costed needs at the scale of national climate action plans, others communicated needs at the activity or sector level. Figure 1 provides an overview of the articulation of the needs of developing country Parties, including costed needs, across the eight types of report reviewed for the second NDR.

Figure 1
Overview of needs, including costed needs, identified by developing country Parties, by type of national report



[7] A total of 53 reports reviewed did not express needs. In addition, as no updated or new NAPAs have been published since the first NDR, the information on 51 NAPAs reported therein is not repeated in the second NDR (refer to the first NDR for information on NAPAs).

12. The ranges in the amounts of costed needs identified by developing country Parties reflect either how several Parties reported low- to high-range estimates at the activity, sector or thematic level on an annual or cumulative basis, or how Parties included different estimates for sector or thematic needs that sum to a lower amount than that provided for overall investment needs. As at 30 June 2024:

(a) NDCs from 142 Parties contained a total of 5,760 needs. Of these, 2,753 (48 per cent) are costed needs reported by 98 Parties, amounting to USD 5.036–6.876 trillion. Given that these needs represent the largest number of Parties reporting costed needs across the report types, they are the most representative for this metric. It is understood that the costed needs presented in NDCs do not reflect the entirety of needs across developing country Parties and regions (see paras. 24 and 26 below). The first NDR identified costed needs reported by 78 Parties amounting to USD 5.8–5.9 trillion up until 2030. Accounting for a similar time frame out to 2030 for comparative purposes, the costed needs from the latest NDCs amount to USD 5.012–6.852 trillion cumulatively out to 2030. As identified in the first NDR, the starting points for costed needs out to 2030 in NDCs vary significantly, with some indicating a 2015–2030 time frame and others 2020–2030. Therefore, an annualized cost estimate across different time frames ending by 2030 of implementing the costed needs reported by 98 countries is in the range of USD 455–584 billion per year;[8]

(b) Adcoms submitted by 43 Parties included a total of 1,593 needs. Of these, 673 (42 per cent) are costed needs reported by 29 Parties, cumulatively amounting to USD 1.77–2.4 trillion;

(c) BURs contained 3,097 needs identified by 96 Parties, and 835 (27 per cent) are costed needs reported by 55 Parties, with a cumulative estimated cost of USD 30–31.78 trillion;

(d) LT-LEDS included 1,538 needs identified by 28 Parties; of these needs, 745 (48 per cent) are costed needs reported by 19 Parties, with a cumulative estimated cost of USD 2.34–2.48 trillion;

(e) NAPs contained 4,317 needs identified by 52 Parties. Among these needs, 1,577 (37 per cent) are costed needs reported by 35 Parties, cumulatively amounting to USD 842–844 billion;

(f) NCs contained the highest number of identified needs, with 7,863 needs identified by 145 Parties. Of these needs, 1,058 (13 per cent) are costed needs provided by 57 Parties, cumulatively amounting to USD 28.32–28.67 trillion;

(g) TAPs contained 2,765 needs identified by 47 Parties. Among these needs, 1,708 (62 per cent) are costed needs reported by 39 Parties, cumulatively totalling USD 45 billion;

(h) TNAs contained 2,760 needs identified by 97 Parties. Among these needs, 516 (19 per cent) are costed needs reported by 47 Parties, with a cumulative estimated cost of USD 799–804 billion.

13. The time frame for identified needs can differ, varying within 2006–2070, owing partly to the different purposes of the report types and partly to how Parties chose to report time frames based on their available data and national plans. For example, it is understood that LT-LEDS focus on longer time frames, most NDCs have 5- or 10-year time frames, and BURs and NCs often feature short-term needs. However, Parties also report a mixture of 10- and 30-year time frames in LT-LEDS and 10- to 15-year time frames in NDCs.

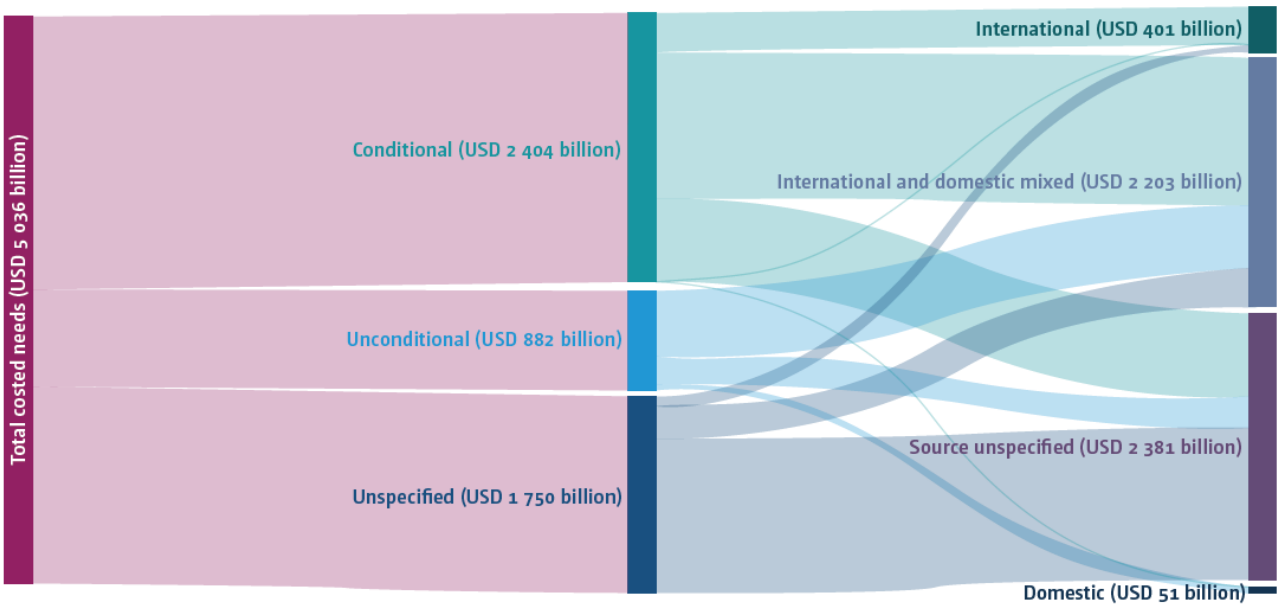
14. Differences in the costed estimates compared with in the first NDR reflect updated NDCs, including changes in reporting scope and information on ranges of costs. A total of 23 developing country Parties reported costed estimates for the first time in their updated NDC, while 28 reported increased estimates compared with their previous NDC. In addition, 4 developing country Parties did not report costed estimates in their latest NDC, and 17 reported decreases in costed estimates compared with their previous NDC owing to

[8] Further information is available in chap. 2.1 of the technical report.

narrowing the scope of the estimates from overall investment to international support specifically or to more detailed costing exercises.

15. Of the total number of costed needs identified by 98 Parties across the NDCs, USD 2.4 trillion is costed for conditional actions, representing 48 per cent of the total, and USD 882 billion is costed for unconditional actions, representing 18 per cent (see figure 2). For 35 per cent of the costed needs, equivalent to USD 1.8 trillion, whether they are conditional or unconditional was not specified. In addition, some Parties provided information on the anticipated sources of finance for achieving their NDCs, though detailed information in this regard is limited. A total of 44 per cent stated that addressing the identified needs may be financed through both international and domestic, and public and private sources. International sources of finance were specified for 8 per cent of the costed needs and domestic sources for 1 per cent. However, for the largest segment (47 per cent) of the needs, no particular source of finance was specified.

Figure 2
Costed needs identified in nationally determined contributions, by conditionality and source of finance



Note: Data represent the low-end estimates of the range of costed needs in NDCs identified by developing country Parties as at 30 June 2024.

2. Sectoral distribution

16. The thematic balance of needs varies depending on the type of report considered. In a number of report types (adcoms, NAPs, NCs, NDCs, TAPs and TNAs) adaptation needs were identified more often than mitigation needs. In others (BURs and LT-LEDS) mitigation needs were identified more often (see figure 3).

17. The key sectors with the highest number of identified adaptation needs across different report types are agriculture and food; forestry, ecosystems and biodiversity; water supply; health and sanitation; disaster management; and coastal zones. A large number of adaptation needs also cut across sectors.[9]

18. Regarding mitigation needs, the energy sector is generally the key sector, with other top mitigation sectors including forestry, ecosystems and biodiversity; waste management; transportation; and agriculture and food.

19. In addition to adaptation and mitigation needs, other needs were expressed, including for averting, minimizing and addressing loss and damage.[10] Regarding averting, minimizing

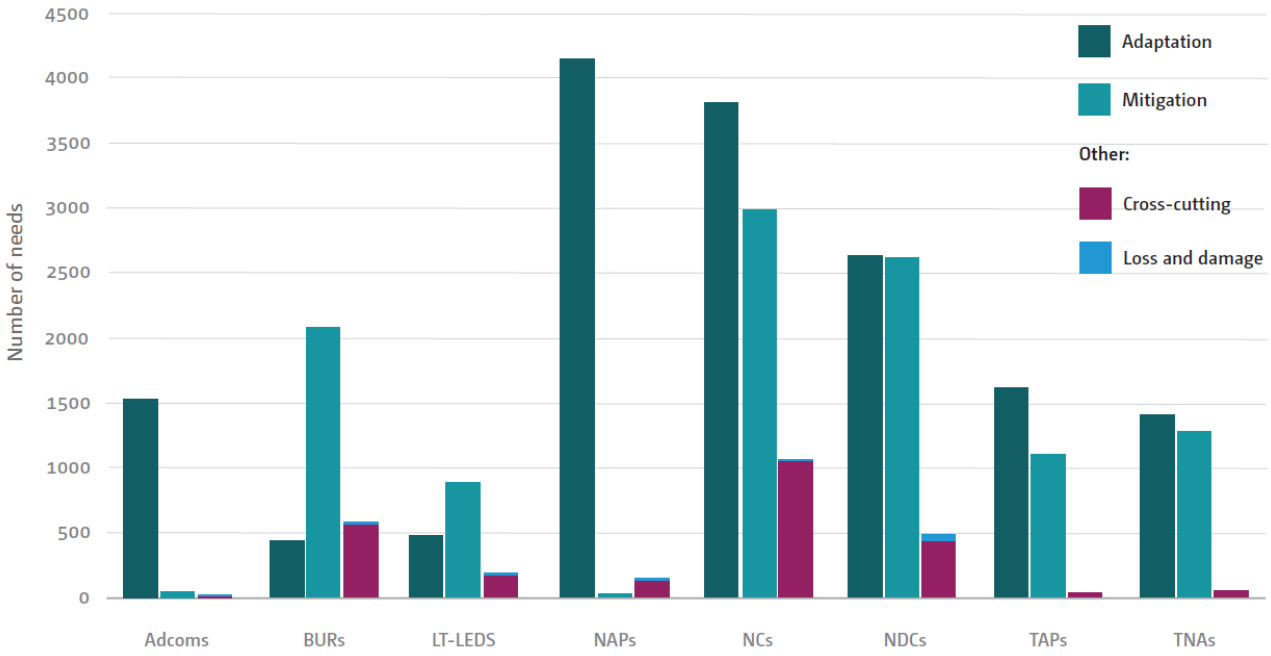
[9] Additional information on adaptation needs, particularly in relation to the United Arab Emirates Framework for Global Climate Resilience, is available in chap. 2.1 of the technical report.

[10] This is without prejudice to any positions of Parties in current or future negotiations, or any understandings on current or future decisions under the Convention and the Paris Agreement.

and addressing loss and damage, most of the reported needs cut across sectors or focus on agriculture and food; forestry, ecosystems and biodiversity; disaster risk management; water supply; and coastal zones. These needs were reported by 29 Parties across report types and may therefore not comprehensively reflect the needs for loss and damage.

20. A total of 79 per cent of the costed needs in NDCs are related to mitigation, with adaptation needs accounting for 16 per cent. Other costed needs expressed include cross-cutting measures and averting, minimizing and addressing loss and damage (5 per cent and less than 1 per cent respectively). In adcoms, NAPs and TNAs a higher proportion of costed needs are allocated to adaptation initiatives, whereas in BURs, LT-LEDS, NCs and TAPs a higher proportion of costed needs relate to mitigation initiatives.

Figure 3
Thematic distribution of expressed needs by type of national report



21. The energy sector accounts for a significant proportion of costed mitigation needs across reports, including 60 per cent in NDCs, 56 per cent in BURs, 74 per cent in LT-LEDS, 53 per cent in NCs, 88 per cent in TAPs and 80 per cent in NAPs. The exception is in TNAs, where the agriculture and food sector accounts for the largest proportion of costed mitigation needs. Other key sectors across reports in terms of costed mitigation needs include transportation (28 per cent in BURs, 11 per cent in LT-LEDS, 29 per cent in NCs and 9 per cent in NDCs) and buildings (16 per cent in BURs and 17 per cent in NCs); heavy industry, and agriculture and food also feature among these sectors.

22. Sectors where the most significant proportions of costed adaptation needs are focused differ by type of report. For NAPs, almost half of costed adaptation needs cut across sectors, whereas the infrastructure and buildings, agriculture and food, and energy sectors account for 16, 9 and 8 per cent of costed adaptation needs respectively. Adcoms report significant costed needs in transportation (35 per cent), water supply (21 per cent) and disaster risk management (18 per cent). A total of 25 per cent of costed adaptation needs in NDCs are in agriculture and food, 17 per cent are in health and 15 per cent are in water supply. The costed adaptation needs in TAPs and TNAs focus on agriculture and food (62 and 83 per cent respectively) and water supply (17 per cent each).

23. In addition to costed needs for adaptation and mitigation, other costed needs expressed include activities to avert, minimize and address loss and damage. A sectoral breakdown of costed needs for averting, minimizing and addressing loss and damage is available only for two NCs and five NDCs. In NCs, all costed loss and damage needs are cross-cutting. In NDCs, costed loss and damage needs are primarily in transportation (21 per cent); energy (17 per cent); forestry, ecosystems and biodiversity (16 per cent); agriculture and food (14

per cent); health and sanitation (12 per cent); and coastal zones (10 per cent). Costed loss and damage needs in the water supply sector account for 6 per cent, and those in the infrastructure and buildings sector account for 3 per cent.

3. Geographical distribution

24. As also noted in the first NDR, data and information on needs expressed in national reports are dynamically changing and therefore may be incomplete. Although the number of needs and costed needs communicated in national reports is lower for some geographical regions than for others, a lower number of needs reported does not mean those regions have 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 this report should not be used to draw comparisons of the actual needs across regions. African countries reported the highest number of expressed needs across most report types, including adcoms, BURs, NCs, NDCs and TNAs, while Asian countries accounted for the highest number of expressed needs in LT-LEDS, NAPs and TAPs (see figure 4).

Figure 4

Geographical distribution of costed needs by type of national report

(Percentage of total costs)

Note: One cell represents information from a single Party in the region.

25. The majority of identified costed needs are in Asia across report types, apart from LT-LEDS where costed needs in Africa are predominant. By comparison, costed needs identified in NDCs from 98 Parties are predominantly reported by Parties in two geographical regions: Asia representing 65 per cent and Africa 33 per cent (see figure 4).

26. For some report types, costed needs are highly concentrated in the reports of just a few Parties. This can be a result of different population sizes, economic drivers, longer time frames of needs expressed, other national circumstances or different methodological approaches, including due to lack of reporting requirements in that regard. With USD 26.8 trillion in costed needs, one developing country Party represents 89 per cent of the costed needs identified in BURs and 95 per cent in NCs but covers a time frame from 2021 to 2060. The remaining 11 per cent (USD 3.3 trillion) of the costed needs identified in BURs and 5 per cent (USD 1.5 trillion) in NCs cover 54 and 56 Parties respectively. Another developing country Party represents 69 per cent (USD 1.6 trillion) of costed needs identified in LT-LEDS and spans a time frame up until 2050. The remaining 31 per cent (USD 715 billion) of the costed needs identified cover 18 Parties. Two developing country Parties represent 68 per cent (USD 572 billion) of costed needs in NAPs, and three Parties represent 85 per cent (USD 1.5 trillion) in adcoms. The remaining 32 and 15 per cent (USD 271 billion and USD 268 billion) cover 33 and 26 Parties respectively. Two Parties represent 77 per cent (USD 615 billion) of the costed needs identified in TNAs and another two represent 50 per cent (USD 23 billion) in TAPs. The remaining amounts (USD 184 billion and USD 23 billion) are covered by 45 and 37 Parties respectively. Costed needs in NDCs are more evenly distributed, where three Parties represent 47 per cent of the estimated costed needs (USD 2.4 trillion) and the remaining 53 per cent (USD 2.7 trillion) is covered by 95 Parties.

27. An overview of needs reported in NDCs by region is provided below:

(a) The largest number of needs and costed needs was reported by **African** countries, with 53 reporting a total of 2,981 needs, of which nearly 47 per cent focused on adaptation, 46 per cent on mitigation and around 7 per cent on cross-cutting sectors. Of these, 1,692 needs reported by 51 countries have been costed, amounting to USD 1.6–1.9 trillion. The costed needs are significantly higher for mitigation (USD 970–979 billion) than for adaptation (USD 430–693 billion). Other costed needs include cross-cutting measures and averting, minimizing and addressing loss and damage (USD 214 billion and USD 3 billion respectively). A total of 17 countries in the Eastern Africa subregion account for most of the costed needs (USD 614–615 billion), followed by Northern Africa (USD 351 billion) and Western Africa (USD 332–336 billion). Southern and Middle Africa comprise the remainder of the costed needs (USD 205–214 billion and USD 114–371 billion respectively). Egypt, Ethiopia and Nigeria reported the highest costed needs among African countries;

(b) In **Asia**, 38 countries reported 1,046 needs, with 55 per cent focused on mitigation, 38 per cent on adaptation and 7 per cent on cross-cutting sectors. A total of 374 needs reported by 20 countries have been costed, amounting to USD 3.3–4.9 trillion, making the costed needs in Asia the highest among all regions. The costed needs for mitigation are particularly high (USD 2.9 trillion) compared with those for adaptation (USD 325–431 billion). A substantial portion of costed needs (USD 46 billion to 1.5 trillion) are cross-cutting. The Southern Asia subregion has the highest costed needs in Asia, ranging from USD 2.5 million to USD 4 trillion, from seven countries. The costed needs in South-Eastern Asia account for USD 629–665 billion from five countries, followed by USD 147 billion from four countries in Western Asia and USD 12 billion from one country in Eastern Asia. The high costed needs in Asia are largely driven by significant costs reported by India, Indonesia, Iran (Islamic Republic of) and Pakistan;

(c) In **Europe**, six countries reported 261 needs, with 75 per cent focused on adaptation and 21 per cent on mitigation. The Republic of Moldova reported 95 costed needs, amounting to USD 9 billion, of which USD 5 billion is allocated to mitigation and USD 4 billion to adaptation;

(d) In **Latin America and the Caribbean**, 29 countries reported 958 needs, with 43 per cent focused on mitigation, 41 per cent on adaptation and 11 per cent on cross-cutting sectors. A total of 334 needs reported by 17 countries have been costed, amounting to USD 90 billion. Costed needs in the region are notably higher for mitigation (USD 43 billion) than

for adaptation (USD 28 billion). Other costed needs include cross-cutting measures and averting, minimizing and addressing loss and damage (USD 14 billion and USD 5 billion respectively). The Caribbean subregion accounts for USD 65 billion of the costed needs from 10 countries, followed by USD 22 billion from four countries in Central America and USD 2.4 billion from three countries in South America. Cuba, the Dominican Republic, Haiti and Panama reported the highest costed needs among countries in the region;

(e) In **Oceania**, 14 countries reported 514 needs, with nearly 50 per cent focused on adaptation, 39 per cent on mitigation and 10 per cent on cross-cutting sectors. A total of 258 needs reported by nine countries have been costed, amounting to USD 8 billion. The costed needs are balanced between mitigation and adaptation (USD 4 billion each). The Melanesia subregion reported the highest costs, amounting to USD 8 billion from four countries, whereas Micronesia reported USD 1 billion from one country. One country in Polynesia reported costed needs amounting to USD 10 million. Fiji, Papua New Guinea, Solomon Islands and Vanuatu reported the highest costed needs in the region.

28. The LDCs reported 2,574 needs in their latest NDCs, with nearly 50 per cent focused on adaptation, 45 per cent on mitigation and 5 per cent on cross-cutting sectors. The implementation costs for 1,467 costed needs in 41 LDCs amount to USD 1 trillion, with USD 783–788 billion for mitigation and USD 239–248 billion for adaptation. Other costed needs include cross-cutting measures and averting, minimizing and addressing loss and damage (USD 34 billion and USD 8 billion respectively). The LDCs in Africa represent 76 per cent of the costed needs. However, the LDCs in Asia, with 22 per cent of the costed needs, include the individual LDCs reporting the most needs: Bangladesh and Ethiopia;

29. **SIDS** reported 1,430 needs, with 45 per cent focused on adaptation and 42 per cent on mitigation. Other needs expressed include cross-cutting measures and averting, minimizing and addressing loss and damage (9 and 3 per cent respectively). Of these, 668 needs reported by 28 SIDS have been costed, amounting to USD 89 billion, with USD 42 billion for mitigation and USD 36 billion for adaptation. Other costed needs include cross-cutting measures and averting, minimizing and addressing loss and damage (USD 5 billion and USD 5 billion respectively). SIDS in Latin America and the Caribbean reported the highest number of needs and costed needs, at approximately 77 per cent of the needs reported by SIDS. African SIDS accounted for 14 per cent and Oceania SIDS 9 per cent of costed needs. Cuba, the Dominican Republic and Haiti reported the most needs of all SIDS at the country level.

4. Distribution by means of implementation

30. Finance is the most commonly needed means of implementation across most report types, constituting 33 per cent of needs reported in adcoms, 24 per cent in BURs, 41 per cent in LT-LEDS and 30 per cent in NDCs. TAPs and TNAs focus mainly on technology development and transfer needs, accounting for 39 and 55 per cent of the needs reported respectively. Capacity-building is the primary means of implementation reported as needed in NAPs and TAPs, accounting for 31 and 26 per cent of the total needs for those report types respectively. In NDCs, 237 of the 648 capacity-building needs reported have been costed, totalling USD 10.29 billion. Similarly, 140 of the 485 technology development and transfer needs reported have been costed in NDCs, amounting to USD 777.18 billion.

5. Other areas of need expressed

31. In their NDCs, 81 per cent of developing country Parties provided information related to gender and 34 per cent affirmed they will take gender into account in implementing the NDC. For instance, Ghana’s NDC includes an assessment of the gender-responsiveness of all policy actions, including those relating to mitigation and adaptation. Uruguay’s NDC includes a list of cross-cutting adaptation measures categorized by their potential to address gender inequalities, guided by its 2021 gender and climate change action plan. Thailand emphasized its need for support for developing its next NDC, particularly in assessing gender sensitivity as a critical aspect of policy implementation.

32. A total of 40 per cent of developing country Parties indicated an increased focus on the role of local communities and Indigenous Peoples in national matters, taking into account

the rights of Indigenous Peoples at the national level, which include enabling legal and consultative arrangements for protecting their rights. For example, the priority recommendations listed in Sudan's NAP include assessing and documenting existing Indigenous knowledge and developing options for overcoming climate vulnerabilities.

33. With respect to energy poverty as it relates to sustainable development, many Parties highlighted multiple co-benefits in relation to addressing their mitigation needs, such as using renewable energy, improving energy efficiency to enhance energy security and using renewable energy in rural areas to provide increased access to sustainable energy. Those Parties with economic diversification plans or actions focused on high-emitting sectors identified the co-benefits of enhanced air quality and energy security achieved by addressing needs for deploying renewable energy technologies, adopting procedures for carbon dioxide capture and storage in the oil and gas industry, improving energy efficiency in the industry and buildings sectors, and implementing fuel switching in the transport sector. In addition, many Parties highlighted the co-benefits of adaptation action in the agriculture and water supply sectors as it relates to achieving individual Sustainable Development Goals.

B. Information and data on needs from other reports

34. In response to the call for evidence, Colombia provided additional quantitative information that updated its NDC costed estimates for adaptation needs and for mitigation needs up until 2030.[11] Ukraine provided an updated breakdown of its mitigation needs until 2030.[12, 13]

35. Information and data on the needs of developing countries from regional and global reports are predominantly based on integrated energy–climate models that take into account climate, socioeconomic, technological and financial factors to forecast energy use, technology deployment and corresponding investments across a variety of economic sectors.

36. The **annual mitigation investment needs** of developing countries up until 2030 are estimated to be USD 1.1–2.4 trillion, and up to 2.9 trillion up until 2035 across available sources of information.[14] Sources of information that compare current investment trends with estimated energy needs highlight that the largest increases in investment (incremental investments) will be required in developing countries, with large regional differences in multiplication factors ranging from 2–4 times (Eastern Asia) to 10–20 times (Middle East).[15]

[11] Costed needs for Colombia in its submission amount to USD 1.63–2.93 billion for adaptation needs until 2030 and USD 2.3–3.8 billion for annual mitigation needs until 2030.

[12] Costed needs for Ukraine in its submission amount to USD 98.4 billion by 2030. The SCF notes that under the Convention Ukraine is listed as a Party included in Annex I to the Convention and as a country that is undergoing the process of transition to a market economy.

[13] Reflection of the data does not represent any views of the SCF with regard to the status of any Party under the Paris Agreement.

[14] Bhattacharya A, Songwe V, Soubeyran E, et al. 2023. *A climate finance framework: decisive action to deliver on the Paris Agreement – Summary*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. Available at https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/11/A-Climate-Finance-Framework-IHLEG-Report-2-SUMMARY.pdf; BloombergNEF. 2023. *Mobilizing Capital in and to Emerging Markets*. London: Bloomberg Finance L.P. Available at https://assets.bbhub.io/professional/sites/24/Mobilizing-Capital-in-and-to-EMDEs.pdf; IEA. 2024. *Reducing the Cost of Capital*. Paris: IEA. Available at https://www.iea.org/reports/reducing-the-cost-of-capital; International Monetary Fund. 2023. *Global Financial Stability Report: Financial and Climate Policies for a High-Interest-Rate Era.* Washington D.C.: International Monetary Fund. Available at https://www.imf.org/en/Publications/GFSR/Issues/2023/10/10/global-financial-stability-report-october-2023#Overview; Kreibiehl S, Yong Jung T, Battiston S, et al. 2022. Investment and finance. *In*: *IPCC. 2022. Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg3/.

[15] Data from IEA. 2023. *World Energy Outlook*. Paris: IEA. Available at https://www.iea.org/reports/world-energy-outlook-2023; International Monetary Fund. 2023. *Global*

37. Most investment needs for mitigation in developing countries are in the energy sector, particularly in the power generation, grids and storage subsectors, until 2030 at 54 per cent of USD 2.4 trillion in annual needs, followed by energy efficiency in buildings, transport and industry at 27 per cent for the same time frame.[16] After 2030, the power generation, grids and storage subsectors remain dominant at 52 per cent of USD 2.9 trillion in annual investment needs but energy-efficient investment needs become more prominent at 34 per cent. Low-emission fuels and carbon removal technologies comprise up to 6 per cent of investment needs in mitigation scenarios, and unabated fossil fuel investment comprises 14 and 8 per cent for the respective time frames. Other estimates of fossil fuel supply investment needs based on expected demand or of reference cases are higher, from USD 610 billion globally per year for oil supply from 2022 to 2045,[17] or USD 738 billion in upstream investment in oil and gas globally by 2030.[18] The investment needed for the envisaged capacity needs for carbon dioxide capture and storage projects is estimated at USD 100–250 billion per year up until 2030 and USD 435 billion to USD 1 trillion per year by 2050.[19]

38. Regional and global reports also provide cost estimates related to **adaptation and resilience**. The AR6 compares available evidence of the annual adaptation costs of developing countries and reports a median estimate of USD 127 billion (ranging from USD 15 billion to USD 411 billion) for 2030 and USD 295 billion (ranging from USD 47 billion to USD 1.088 trillion) for 2050.[20] The United Nations Environment Programme *Adaptation Gap Report 2023* provides an updated central range for annual adaptation costs of developing countries of USD 215–387 billion in 2030 based on two methodological approaches.[21] The lower bound of the range is the median estimate derived from an aggregation of available sectoral modelling studies, while the upper bound is derived from an analysis and extrapolation of 85 NDCs and NAPs as at July 2023.

39. With regard to sectors, existing assessments point to the highest costs and greatest needs in the areas of resilient infrastructure and agriculture, as well as coastal zones, flood protection and water management more broadly. Available sources of information conclude that adaptation and resilience needs are highest in Asia, followed by Africa, Latin America and the Caribbean, and Eastern Europe.

40. Some sources of information contain cost estimates for climate-induced losses and damages in developing countries. While the identification of a robust range of estimates with

Financial Stability Report. Washington D.C: International Monetary Fund. Available at https://www.imf.org/en/Publications/GFSR/Issues/2023/10/10/global-financial-stability-report-october-2023; Kreibiehl S, Yong Jung T, Battiston S, et al. 2022. Investment and finance. *In*: *IPCC. 2022. Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg3/; Yilmaz F, Alswaina F, Belaid F, et al. 2023. *Closing the Investment Gap to Achieve Paris Agreement Goals*. Riyadh: King Abdullah Petroleum Studies and Research Center. Available at https://www.kapsarc.org/research/publications/closing-the-investment-gap-to-achieve-paris-agreement-goals/.

[16] IEA. 2024. *Reducing the Cost of Capital*. Paris: IEA. Available at https://www.iea.org/reports/reducing-the-cost-of-capital.

[17] Organization for Petroleum Exporting Countries. 2023. *World Oil Outlook 2023*. Vienna: Organization for Petroleum Exporting Countries. Available at https://woo.opec.org/index.php.

[18] International Energy Forum and S&P Global Commodity Insights. 2024. *Oil and Gas Investment Outlook*. Available at https://www.ief.org/focus/ief-reports/upstream-oil-and-gas-investment-outlook-2024.

[19] Submission from the King Abdullah Petroleum Studies and Research Center to the call for evidence from the SCF. Available at https://unfccc.int/topics/climate-finance/resources/standing-committee-on-finance-info-repository#Report-on-the-determination-of-the-needs-of-developing-country-Parties-related-to-implementing-the-Convention-and-the-Paris-Agreement.

[20] IPCC. 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. H Pörtner, D Roberts, M Tignor, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[21] United Nations Environment Programme. 2023. *Adaptation Gap Report 2023: Underfinanced. Underprepared.* Nairobi: United Nations Environment Programme. Available at https://www.unep.org/resources/adaptation-gap-report-2023.

confidence is not possible owing to a range of methodological challenges, the AR6 notes that global aggregate economic impacts could be higher than previously estimated. Regarding estimated cost as a percentage of gross domestic product, available studies reviewed for the second NDR indicate a similar scale to the indicated median range of 0.2–2.0 per cent reported by Working Group II in its contribution to the AR5.[22]

41. Information and data generated from the national, regional and global reports considered cannot be compared across reports, as they have different time frames, objectives and scopes. However, all the reports may be viewed as complementary in offering different insights, granularity, processes and approaches for identifying needs.

C. Processes and approaches for the determination of needs in developing country Parties

42. Developing country Parties have varied institutional arrangements for identifying climate change needs, which are described in most of their national reports. While arrangements are diverse, many countries have established specialized ministries or institutions within their ministries whose mandate is to lead climate change action and relevant coordination processes.

43. These institutional arrangements can often extend to processes for determining needs in which a steering committee or climate change unit within a lead ministry is identified to lead and coordinate efforts in the needs identification process. The committee or unit, which is often led by a focal point, takes up the role of identifying the needs and deciding on the approaches to use. Some countries have established an interministerial committee to facilitate cross-sectoral coordination among ministries and support work on data collection. In total, 90 per cent of NAPs and 45 per cent of BURs and NCs reported Parties having such interministerial committees in place.

44. Stakeholder consultation is a key part of the needs identification process; however, the stakeholders consulted are mainly driven by the type of institutional arrangements that a country has adopted for this process. Therefore, the stakeholder consultation process varies widely. Some countries adopt broad stakeholder consultations and an interministerial committee facilitates collaboration between government institutions, subnational authorities, civil society and the private sector.

45. A total of 76 per cent of Parties that submitted NDCs referred to formal arrangements being in place for consulting stakeholders, including the general public, local communities, Indigenous Peoples, private entities, business and trade associations, civil society organizations, youth associations, women's associations, regional development partners, academia and research communities. Of those Parties, 91 per cent indicated that they conducted such consultation processes in an inclusive and participatory manner.

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

1. Methodologies used in national reports of developing country Parties

46. Needs determination at the national level and corresponding methodologies vary but tend to follow a general sequence of first identifying and prioritizing needs and actions and then arriving at quantified financial estimates of the costs of identified needs.

47. The detail provided on the methodological steps used for assessing and determining needs varies in the reports of developing country Parties but is commensurate with the guidelines related to the different report types. Parties provided information on the methods and assumptions used in determining mitigation contributions, targets and measures, and

[22] IPCC. 2014. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. CB Field, VR Barros, DJ Dokken, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at http://www.ipcc.ch/report/ar5/wg2.

adaptation measures. The advent of biennial transparency reports under the enhanced transparency framework, prepared in accordance with the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement, provides an opportunity to improve the communication of information, and the methodologies and assumptions used, in determining the needs of developing country Parties, possibly by applying a more standardized format than in other report types.

48. In terms of identifying mitigation needs, many Parties use models such as the Low Emissions Analysis Platform and the Greenhouse Gas Abatement Cost Model when describing the methodologies and assumptions used to account for the implementation of policies and measures or strategies in their NDCs. Other methods referred to by Parties include applying multi-criteria indicators and performing socioeconomic analysis that considers economic and social factors to determine the feasibility and affordability of measures in a given time frame and using a sector-specific performance matrix depending on the requirements of the Party. For almost all TNAs developing country Parties adopted multi-criteria analysis to prioritize their technology needs.

49. In preparing NAPs, adcoms and other adaptation components of national reports, most Parties apply risk and vulnerability assessments from existing studies at the sectoral level or assessments from regional centres and networks. Climate vulnerability and risk assessments include identifying risk, particularly for vulnerable sectors or vulnerable population groups, and assessing the risk in terms of hazards, exposure and vulnerability. For some Parties, current climate data are limited, do not cover all sectors or are not compatible with current meteorological models. These Parties reference regional and global assessments for the synthesis of impacts, vulnerability and adaptation. For instance, most NAPs refer to the latest reports of the IPCC, including the AR5 and AR6.

50. Parties often rank and prioritize their adaptation options using multi-criteria analysis and cost–benefit analysis. Multi-criteria analysis is used to characterize selected sectors and to identify and prioritize key measures on the basis of predetermined criteria such as cost-effectiveness and feasibility. Other methods mentioned by Parties include applying criteria such as timing or urgency, cost, efficacy, flexibility, economic and social implications and political acceptance.

51. A review of information related to cost estimates of needs reported in NDCs found that 11 per cent of the estimates were accompanied by a description of the methodology used in deriving them, while 83 per cent did not have a description and the remainder had a partial description, for example only for specific themes, noting that this information is not required. However, approximately half of the costed needs without a description of the cost estimation approach presented information in a way in which approaches could be inferred, for example through extensive sector and project lists, sometimes including unit cost assumptions.

2. Methodologies used in regional and global reports on the needs of developing country Parties

52. Regional and global assessments of mitigation and adaptation needs are predominantly based on top-down integrated climate, energy and macroeconomic modelling, whereby key assumptions on climate scenarios and ambition, energy demand and supply, technology choices and costs, and socioeconomic development have an impact on resulting estimates of investment needs. Several regional and global reports refer to the first NDR as informing updated bottom-up analyses of climate investment needs, in particular at the regional level and for adaptation.

53. There are limitations with the variance in methodologies across regional and global reports, with key assumptions and calculations for arriving at aggregate estimates, including assumptions on technology costs and the need for different types of financial support, not always available across the regional and global reports analysed for the second NDR, which hindered a broader understanding of their robustness and comparability. Further, the regional and country classifications used in available studies varied, which affected the comparability of needs estimated by geographical region and for developing country groupings as a whole.

E. Gaps, challenges and opportunities in determining the needs of developing country Parties

54. The submissions of biennial transparency reports in 2024 and enhanced NDCs in 2025 represent important milestones for making progress in reducing gaps, addressing challenges and seizing opportunities related to determining the needs of developing countries.

55. The primary gaps associated with determining the needs of developing countries include data and information gaps and institutional gaps. Data and information gaps pertain to the lack of robust, comprehensive and comparable information on the needs of developing countries. Institutional gaps pertain to the lack of capacity within many developing countries to perform such needs assessments. Each of these data gaps has a number of associated challenges.

56. For data and information gaps, the principal challenges are methodological and assumption challenges. Methodological challenges relate to the wide variety of methodological approaches employed for assessing needs and the high technical complexity involved. The lack of commonality or standardization makes it challenging to interpret and compare the information included in national reports at different levels of granularity. Methodologies are developed and utilized based on assumptions with regard to climate change or economic scenarios, or various domestic aspects. However, climate change and economic scenarios must rely on different sets of assumptions with differing degrees of confidence. Significant differences in methodologies and assumptions across assessments pose technical issues for aggregation and comparability.

57. For institutional gaps, the principal challenges are coordination and resource challenges. Coordination challenges exist in coordinating across multiple entities, across scales (i.e. national, subnational and local) and with stakeholder groups. Resource challenges exist in accessing and securing the needed technical, human and financial resources in order to prepare robust needs assessments and in building sustainable capacities for the long term.

58. For methodological challenges, opportunities exist to enhance the comprehensiveness and comparability of needs determination assessments, in part by developing and adapting international best practices to balance standardization and context specificity, such as those used for the World Bank's Country Climate and Development Reports. The establishment of best-practice methodologies and continued efforts to build capacity globally will enable more countries to report, thereby improving comprehensiveness and comparability. Achieving this improvement entails enhancing knowledge exchange, capacity-building and technical support.

59. For assumption-related challenges, opportunities exist to enhance reporting and information-sharing on assumptions used as the basis for needs assessments, which will further contribute to the comprehensiveness and comparability of those assessments.

60. For coordination challenges, opportunities exist to strengthen coordination practices including through exchange of information and best practices with a view to adopting whole-of-government and whole-of-society approaches and leveraging diverse expertise and perspectives. This will contribute to the comprehensiveness of needs assessments.

61. For resource challenges, opportunities exist to improve access to relevant data and information, including through approaches that strengthen national data collection and maintenance systems, as well as by enhancing international cooperation and data-sharing, where appropriate. Further, human resources can be improved through training and other capacity-building activities, as well as by leveraging synergies with other reporting processes in order to minimize reporting burden. Finally, financial resources can continue to be scaled up for needs assessments, including by leveraging existing funding opportunities for preparing climate plans and strategies, allocating an appropriate proportion of those financial resources for needs determination activities and adjusting existing financial mechanisms to further make use of readiness support that is targeted at costing the needs of developing countries.

III. Recommendations

62. On the basis of the key findings set out in chapter II above, the SCF invites the COP and the CMA to consider the following recommendations:

(a) *Encourages* developing country Parties to increase the granularity of their reporting on needs for implementing nationally determined climate actions, policies and measures, particularly on whether they are to be addressed using domestic resources and/or international support subject to availability;

(b) *Encourages* developing country Parties to make full use of the common tabular formats in their biennial transparency reports to provide additional information, where available, on needs, including on instruments and support needed for reporting;

(c) *Encourages* developing country Parties, when reporting on needs, to specify the methodologies and underlying assumptions used in identifying their needs, subject to available capacity and resources;

(d) *Encourages* relevant institutions supporting developing country Parties in identifying and costing their needs, such as the operating entities of the Financial Mechanism, United Nations agencies, multilateral agencies and institutions, and capacity-building initiatives, to continue these efforts, including through standardized toolkits for identifying and costing needs as well as strategies for implementing them;

(e) *Recognizes* the need for continued support to assist developing country Parties in completing and submitting national reports under the Convention and the Paris Agreement, including with regard to the elements referred to in paragraph 63(a) above;

(f) *Encourages* relevant institutions supporting readiness funding and project preparation support to consider how funding can support sustained technical capacities in developing country Parties for addressing gaps for needs assessment, including for gender-responsive climate action;

(g) *Encourages* relevant institutions gathering data and information on needs of developing country Parties for sustainable development and climate action to improve the transparency of and access to comparable and comprehensive data on the needs of developing countries identified through their activities;

(h) *Encourages* developing country Parties and relevant institutions gathering data and information on needs of developing country Parties to enhance efforts, approaches and available information related to:

(i) Gender-responsive climate action and the needs of Indigenous Peoples and vulnerable groups;

(ii) The nexus of energy access, climate action and sustainable development;

(iii) Averting, minimizing and addressing loss and damage;

(i) *Encourages* Parties to strengthen coordination, including through exchange of information and best practices, with a view to leveraging a diversity of expertise and perspectives, including for undertaking gender analysis and pursuing participatory stakeholder engagement, particularly of those in vulnerable situations, such as women, girls, youth, Indigenous Peoples and local communities, when costing needs of developing country Parties for implementing action under the Convention and the Paris Agreement;

(j) *Encourages* relevant institutions undertaking needs assessments for developing country Parties to consider reporting on how their assessments take into account country investment and financial strategies as well as coherence with broader country development strategies and plans.