

Executive summary

by the Standing Committee on Finance

of the first report on the determination

of the needs of developing country Parties

related to implementing the Convention

and the Paris Agreement



United Nations
Framework Convention on
Climate Change

ABBREVIATIONS AND ACRONYMS

AC	adaptation communication
AE	advanced economies
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
EME	emerging market economies
EU	European Union
GDP	gross domestic product
GEF	Global Environment Facility
LAC	Latin America and the Caribbean
LEDS	low-emission development strategy(ies)
LIC	low income countries
MDBs	multilateral development bank
MENA	Middle East and Northern Africa
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
SDG	Sustainable Development Goal
SE	South-Eastern
SSC	small state countries
TAP	technology action plan
TNA	technology needs assessment

I. Introduction

1. The first NDR¹ provides an overview of qualitative and quantitative information based on 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 available 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 subsector (chap. 2). The report reflects information and data on needs as mentioned in the national, regional and global reports. The needs are dynamically challenging 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.

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.

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 of 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 thematic and sectoral coverage, time frame and granularity level 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

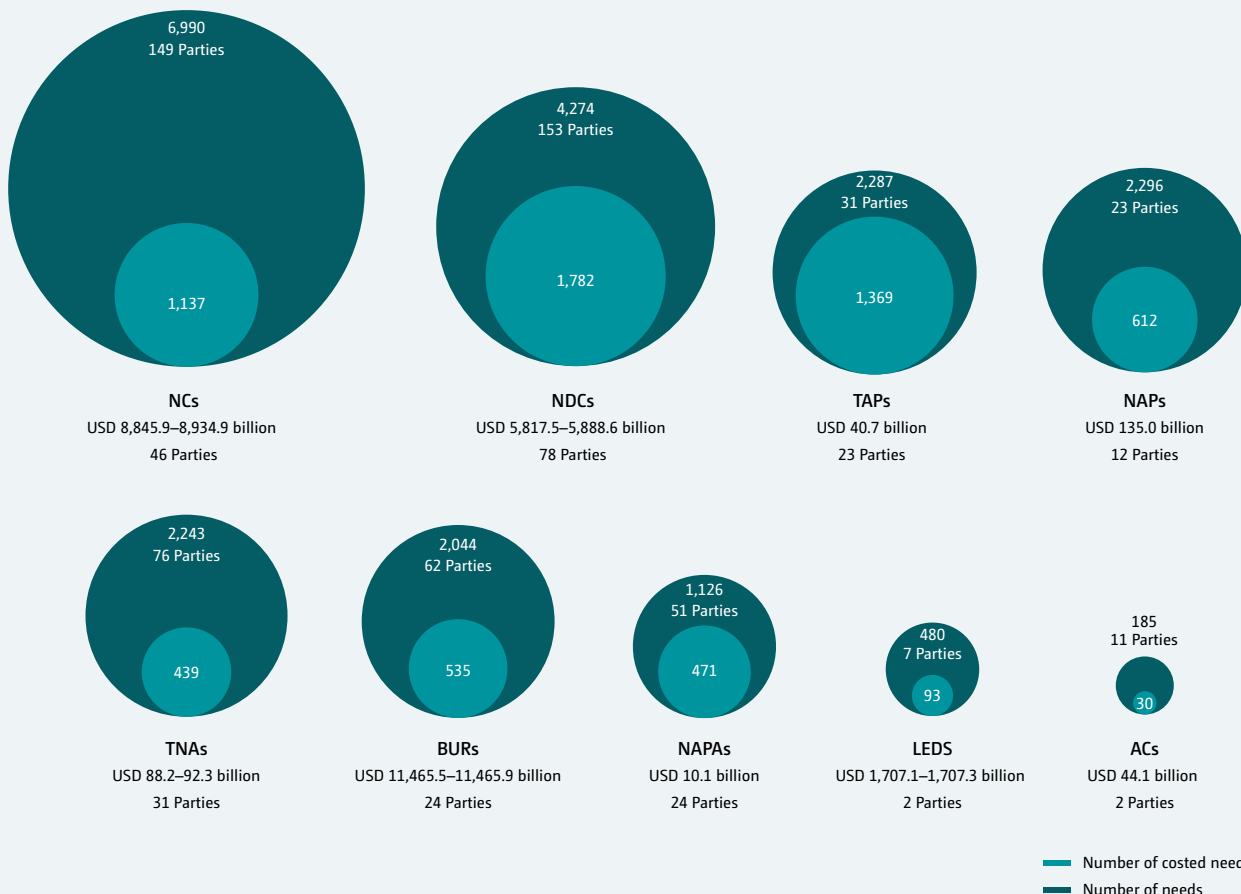
5) See <https://unfccc.int/documents/231567>. The deadline of the call for evidence was extended to 30 October 2020 by, which 34 submissions had been received. All submissions are available at <https://unfccc.int/topics/climate-finance/workstreams/needs-report/repository-of-information-on-the-needs-of-developing-country-parties>.

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 developing countries is counted as a single activity; if activity-level information is 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



Notes: Ranges of costs included where available.

costs, if specified. While some Parties express costed needs for adaptation or mitigation purposes, other communicate needs at the activity or sector level.

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' economy and the scale of climate impacts on them.

(i) Thematic distribution of costed needs

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 the lack of available data, tools and capacity to assessing adaptation needs (see the information on challenges and gaps in paras. 61–66 below).

(ii) Regional distribution

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

Table 1

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

Report	Costed needs (USD billion)				
	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.

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.

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

(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 2.1, 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 2.2). 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, in part, may be owing 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 2.3). 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 3.1).

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 variations 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 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 3.2).

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 Africa¹⁰ (see figure 4 for an example of energy investment needs identified by the International Renewable Energy Agency¹¹).

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 5¹²).

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.

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*. Available at www.ifc.org/wps/wcm/connect/fa3bea68-20f1-4cb4-90b9-3e812d38067f/Climate+Investment+Opportunities+in+South+Asia+-+An+IFC+Analysis.pdf?MOD=AJPERES&CVID=1.raVua.

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%20countries_AFD_B_FINAL.pdf.

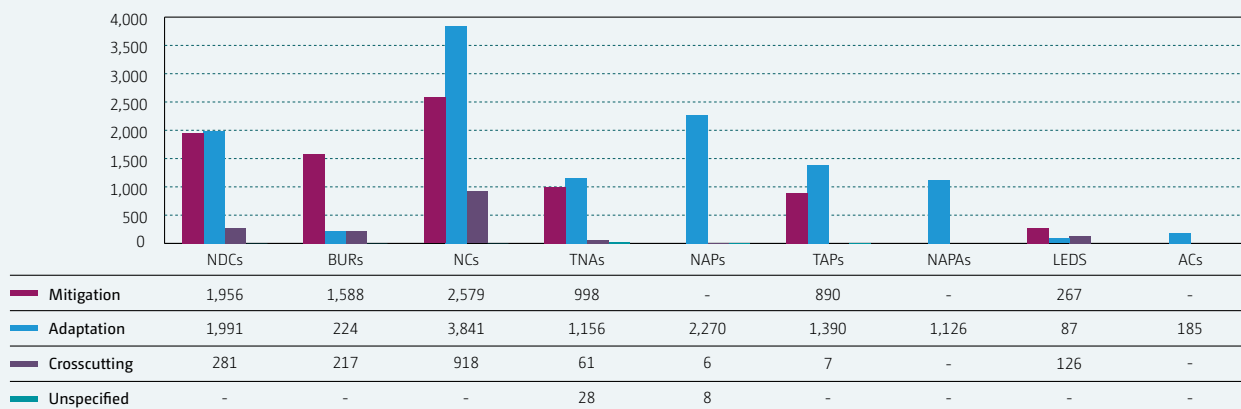
11) For the purpose of the first NDR, various data sources were used to illustrate needs of developing country Parties, without prejudice to the meaning of this term in the context of the Convention and the Paris Agreement, including but not limited to Parties not included in Annex I to the Convention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

12) As footnote 11 above.

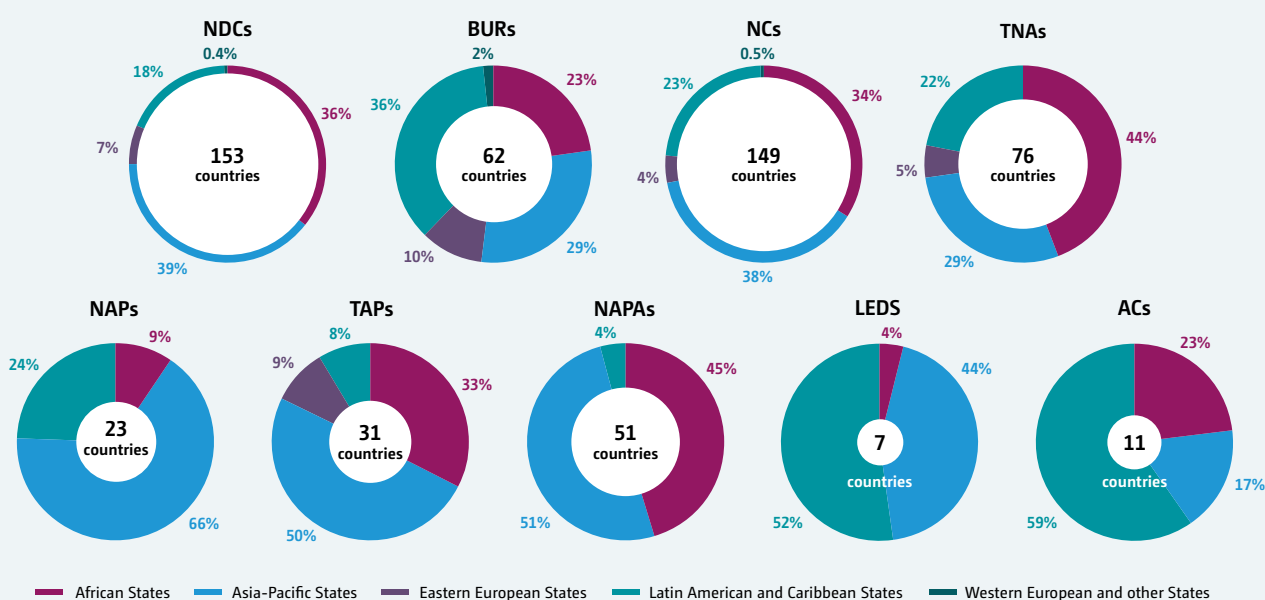
Figure 2

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

2.1: By theme



2.2: By region



2.3: By means of implementation

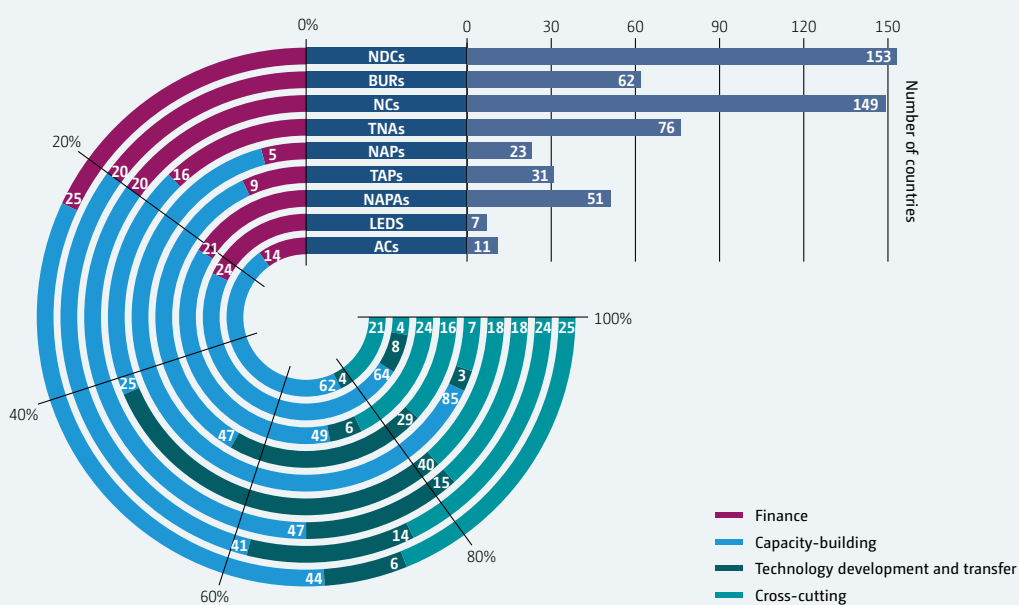


Figure 3

Needs expressed by developing countries in national reports by sector

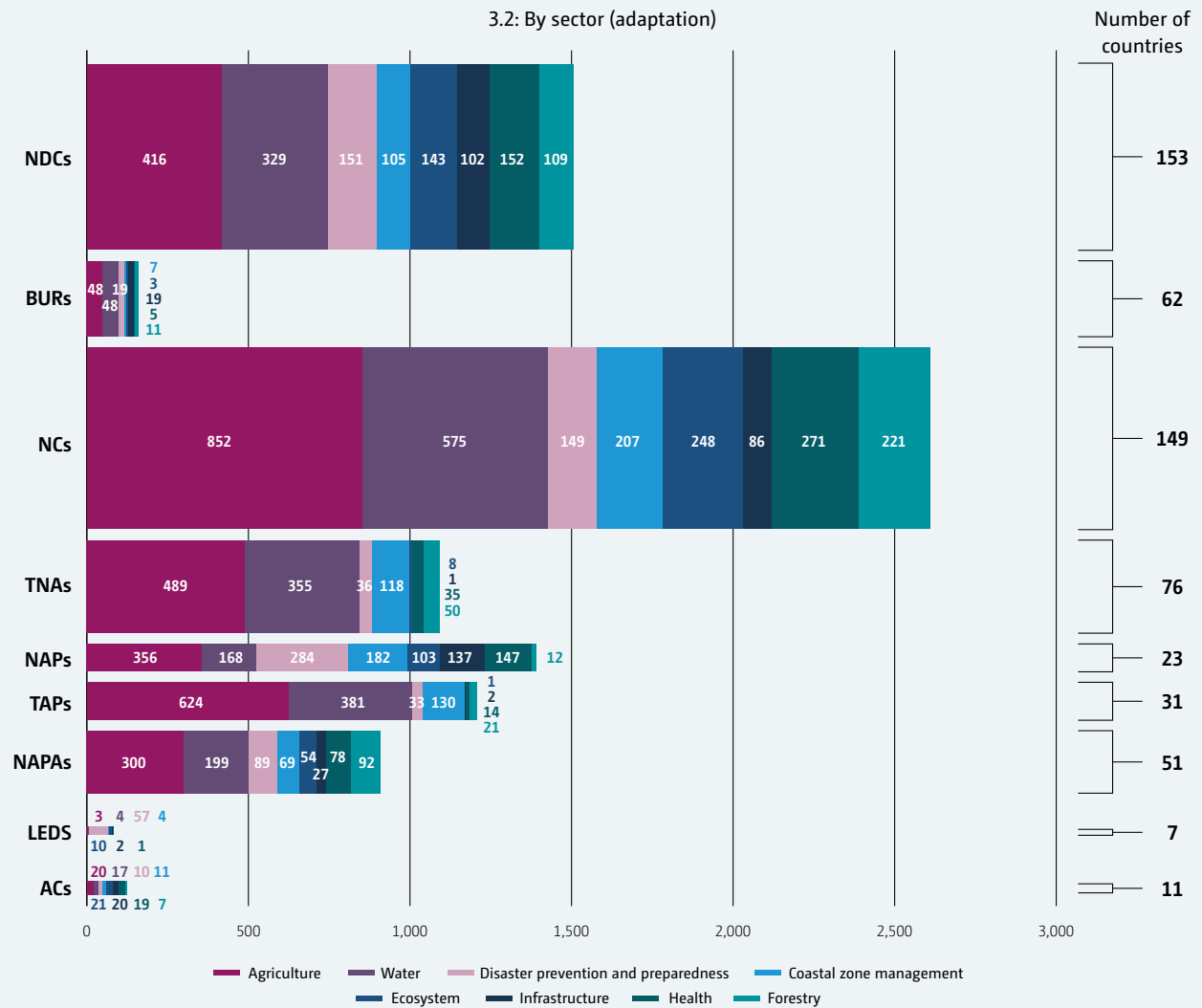
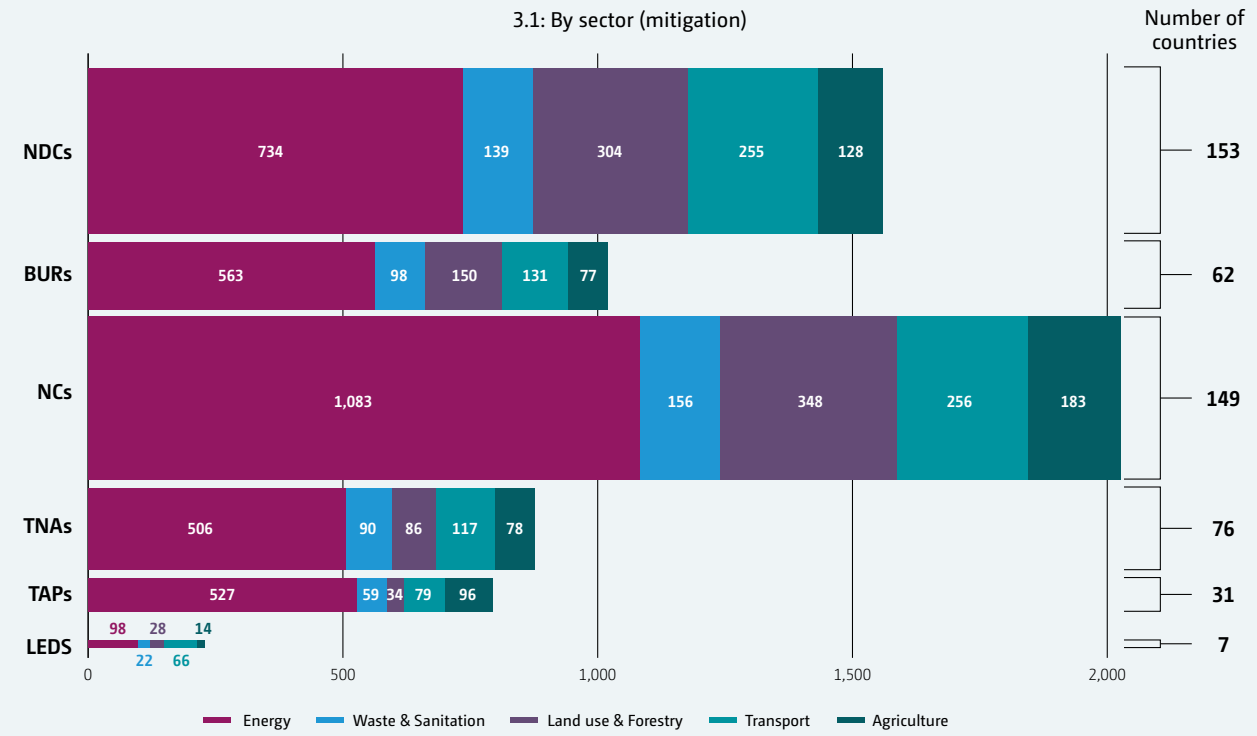
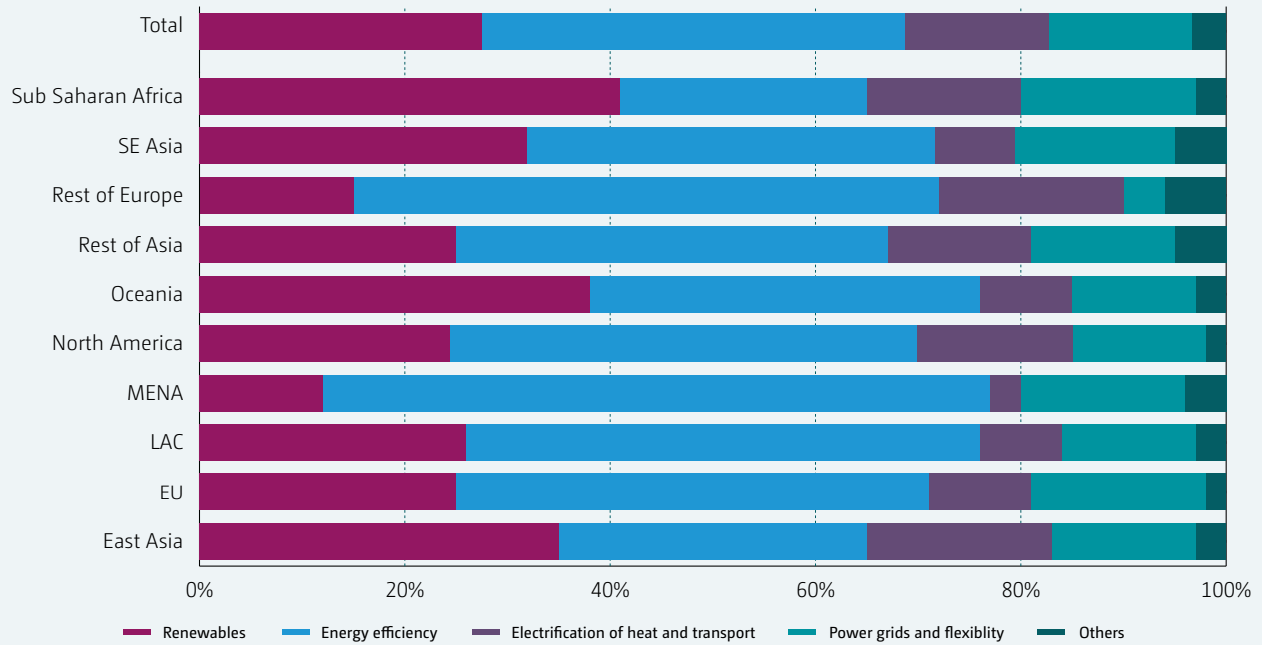


Figure 4

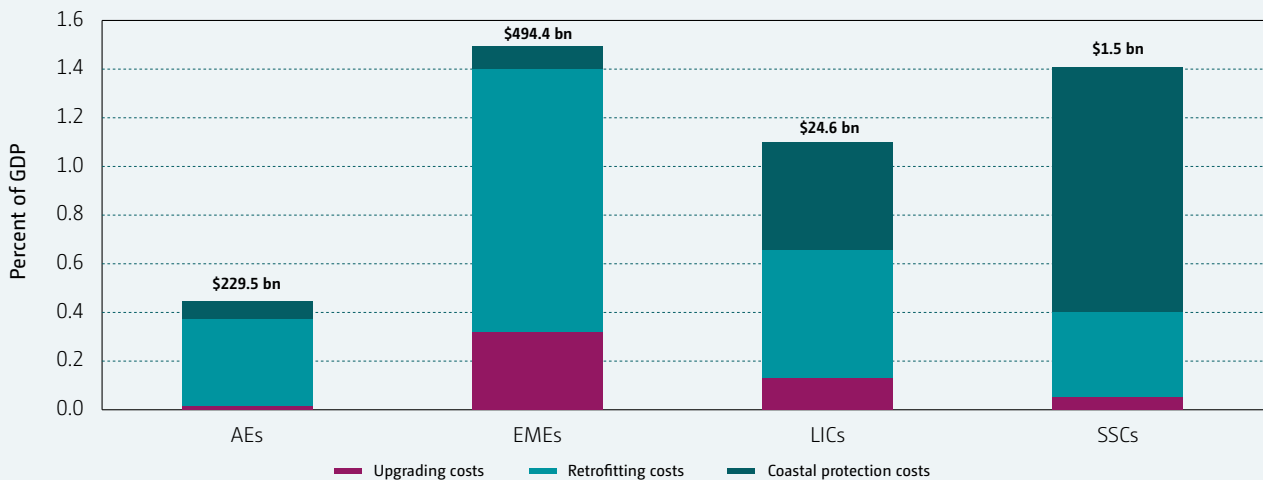
Shares of annual average clean energy investments in the International Renewable Energy Agency transforming energy scenario, by region, 2016–2050



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

Figure 5

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



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

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.

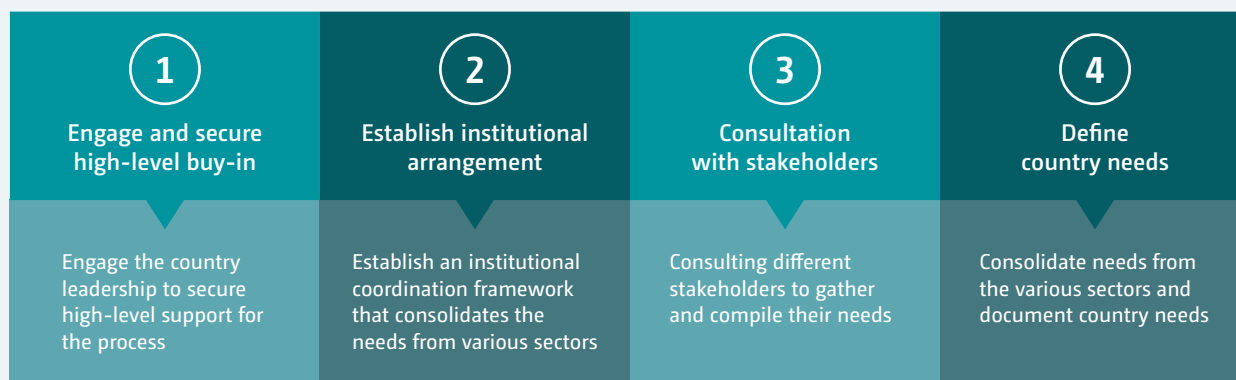
2. Needs identification process

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).

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.

Figure 6

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



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.

13) Technology Executive Committee. 2020. *Enhancing implementation of the results of technology needs assessments*. Bonn: UNFCCC. Available at <https://unfccc.int/tclear/tec/brief13.html>.

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 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 these 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 were 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 levels. Two of the identified drivers of limited coordination was 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.

V. 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 to 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 work plans;
- (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.



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