

## **Executive summary by the Standing Committee on Finance on the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement**

14.10.2021

### **I. Introduction**

1. The first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement (hereinafter referred to as first NDR)<sup>1</sup> provides an overview of qualitative (hereinafter referred to as needs) and quantitative information (hereinafter referred to as costed needs), based on data and evidence available from reports at national, regional and global levels. As such, the first NDR does not assess the needs of developing countries. The number of reported and costed needs are higher in reports of some countries. This does not imply that other countries have no or less needs, but rather, this may be due to the lack of available data, tools and capacity to determine and cost needs.

### **II. Context and mandates**

2. The Conference of Parties (COP), at its twenty fourth session, 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 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (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.<sup>2</sup>

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.<sup>3</sup> COP 25 and CMA 2 further 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.<sup>4</sup>

### **III. Scope and approach**

#### **1. Scope**

4. The first NDR presents qualitative and quantitative information on the needs of developing countries. Quantitative information was compiled from costed needs at project levels and those derived from economic modelling in these reports and other available sources. Qualitative information was derived from descriptions of planned activities, strategic directions, national priorities and action plans in these same sources.

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<sup>1</sup> [\[Weblink to the first NDR\]](#)

<sup>2</sup> Decision 4/CP.24, para 13 and 14.

<sup>3</sup> Decision 11/CP.25, para 9 and decision 5/CMA.2, para 9.

<sup>4</sup> Decision 11/CP.25, para 12 and decision 5/CMA.2, para 12.

5. To the extent possible and based on available information, the first NDR contained an analysis and presentation of the needs of developing country Parties according to time frames, geographic regions, thematic areas and means of implementation, sectors and subsectors (Chapter 2). The report reflects information and data on needs as mentioned in the national, regional and global reports. The needs are dynamic 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. Furthermore, the first NDR illustrates processes and approaches that enable the determination of needs (Chapter 3). It also maps out available tools and methodologies for determining and prioritizing needs, including sector-specific methodologies and tools, and advantages and challenges experienced in their application (Chapter 4). Finally, the report highlights opportunities of determining needs, as well as gaps and challenges (Chapter 5).

7. The first NDR comprises of an executive summary and a technical report. The executive summary was prepared by the SCF while 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.

## 2. Sources of information

8. The first NDR is compiled from sources submitted by developing countries, specifically national reports submitted to the UNFCCC and reports developed by regional and global institutions. The national reports include the following:

- (a) Adaptation communications (ACs),
- (b) Biennial update reports (BURs),
- (c) Long-term low emissions development strategies (LEDS),
- (d) National adaptation plans (NAPs),
- (e) National adaptation programmes of action (NAPAs),
- (f) National communications (NCs),
- (g) Nationally determined contributions (NDCs),
- (h) Technology action plans (TAPs) and
- (i) Technology needs assessments (TNAs).

9. Another source of information are the submissions received from Parties and non-Party stakeholders in response to the call for evidence issued by the SCF.<sup>5,6</sup>

## 3. Approach

10. The technical work comprised a review of literature and sources of available information and data, 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 of the first NDR.

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

12. In preparing this report, the technical team noted data inconsistencies, data gaps and data interpretation challenges as reflected in paragraph 59 below. Efforts were made to overcome these challenges, such as identifying where reporting overlaps exist based on reporting guidelines provided, as well as avoiding double counting in the aggregation and presentation of data.

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<sup>5</sup> Available at: [https://unfccc.int/sites/default/files/resource/Call\\_for\\_evidence\\_2020NeedsReport.pdf](https://unfccc.int/sites/default/files/resource/Call_for_evidence_2020NeedsReport.pdf). The call was further extended until 30 October 2020.

<sup>6</sup> As at October 2020, 34 submissions were received. All submissions are available on the dedicated webpage: <https://unfccc.int/topics/climate-finance/workstreams/needs-report/repository-of-information-on-the-needs-of-developing-country-parties>.

## IV. Key findings

### 1. Overview of the needs of developing country Parties

#### (a) 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 relating to the implementation of the Convention and the Paris Agreement. There are nine types of national reports, which serve different purposes under the Convention and the Paris Agreement, with reported needs varying in terms of thematic and sectoral coverage, time frame, degrees of detail and granularity. In total, 563 documents were included in the analysis of the NDR.<sup>7</sup>

14. Figure 1 provides an overview of the articulation of the number of needs of developing countries, including overall costed needs, across the nine types of national reports submitted by developing country Parties to the UNFCCC.<sup>8</sup> The overall costed needs by type of report is based on activities with associated costs included in the corresponding individual national reports. The needs included in national reports are differentiated by the top-down approach (i.e. needs that are typically estimated using economy-wide or sectoral modelling techniques) and the 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, both data and information on needs may be incomplete as they are dynamically changing.

#### (i) Insights from quantitative data on needs

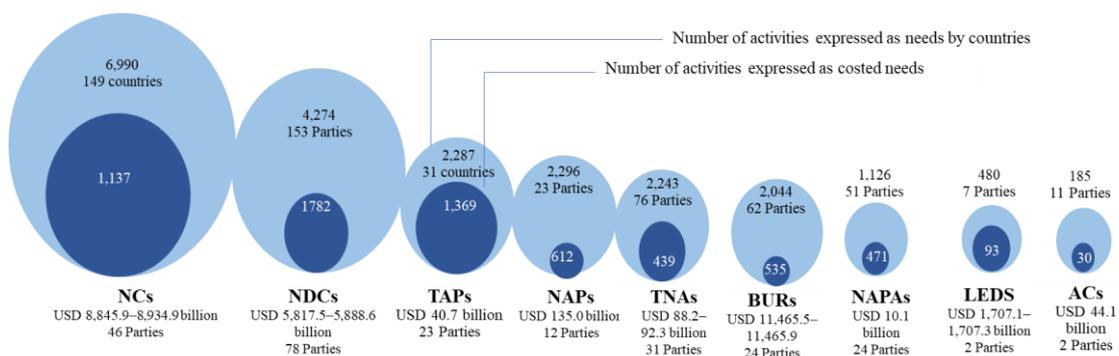
15. The needs identified and articulated by developing countries across the nine different types of national reports encompass a wide range of financial, technology development and transfer, and capacity-building needs. The level of detail in the information provided varies in terms of the description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

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<sup>7</sup> 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 and without aggregation across them.

<sup>8</sup> Needs are catalogued in the analysis at the most granular level where information is listed (i.e. a project or an activity expressed as a need by developing countries is counted as a single activity, if not at sector level, if not at 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 Chapter I 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 reports submitted to the UNFCCC**



Notes: 1) Blue and blue navy denote number of needs and costed needs, respectively  
 2) Ranges included where available

16. NDCs from 153 Parties (as of 31 May 2021) included 4,274 needs, with 1,782 costed needs identified across 78 NDCs cumulatively amounting to USD 5.8 trillion–USD 5.9 trillion up to 2030. Of this amount, USD 502 billion is identified as needs requiring international sources of finance and USD 112 billion as sources from domestic finance. 89 per cent of the costed needs did not provide information on possible sources of finance. NCs from 149 Parties represent the highest number of identified needs (6,990 needs) of which 1,137 costed needs cumulatively amount to USD 8.8 trillion–USD 8.9 trillion, with 5 per cent of the costed needs distributed across 45 NCs and 95 per cent in 1 NC, respectively. BURs from 62 Parties identified 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 in two BURs, respectively– thereby representing the highest amounts of costed needs across the nine national reports. These figures should be seen in light of the size and nature of their economy and the scale of impacts.

## Thematic distribution of costed needs

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

Report	Quantified needs (USD billion)				
	Total	Mitigation	Adaptation	Cross-cutting	Other
ACs	44.1 (100%)	-	44.1 (100%)	-	-
BURs	11,465.53– 11,465.9 (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 (18%)	-	-
NAPs	135.02–135.03 (100%)	-	135.02 (100%)	-	-
NAPAs	10.05 (100%)	-	10.05 (100%)	-	-
NCs	8,845.85– 8,934.94 (100%)	5,019.30– 5,033.83 (57%)	3,812.06– 3,882.07 (43%)	2.23 (>0%)	12.25–16.81 (>0%)
NDCs	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%)
TAPs	40.74 (100%)	21.97 (54%)	18.76 (46%)	-	0.01 (>0%)
TNAs	88.24–92.33 (100%)	30.33–34.33 (34-37%)	57.9–57.98 (63-68%)	0.01 (>0%)	-

*Note:* Ranges included where available

17. As shown in Table 1, cumulatively, costed mitigation needs tend to be larger than costed adaptation needs across reports that cover all thematic areas such as BURs, NCs and NDCs. The overall amount of costed adaptation needs is comparable with the overall amount of costed mitigation needs expressed in NCs (43 per cent and 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 sectors and subsectors, this information is not provided across all reports. Therefore, it is not possible to provide a comprehensive and accurate overall amount on needs by sector and subsector in the first NDR.

18. Although developing countries identified more adaptation than mitigation needs, the latter had more costs identified. This may not imply that mitigation needs are greater, but rather be due to the lack of available data, tools and capacity to assess adaptation needs (see information on challenges and gaps below).

## Regional distribution

Table 2  
**Needs expressed in Nationally Determined Contributions by region**

<i>Region</i>	<i>Expressed needs</i>	<i>Expressed needs with financial information (i.e. costed needs)</i>	<i>Costed needs in billion USD based on the available financial information in NDCs</i>
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 America and the Caribbean States	771	166	168.18–168.26
Western European and other States	15	-	-

19. Available information related to costed needs varies across regions (see Table 2). For example, the NDC data show that African countries included 1,529 needs in their NDCs, of which 874 were costed, cumulatively amounting to USD 2.5 trillion. NDCs of countries in the Asia-Pacific region include 1,677 needs, of which 630 needs were costed, cumulatively amounting to USD 3.2–3.3 trillion. Of the 771 needs expressed in the NDCs of countries in the Latin America and the Caribbean region, 166 NDCs include costed needs, cumulatively amounting to USD 168 billion, of which almost 60 per cent was in one NDC. NDCs of developing countries from the Eastern European region include 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 due to recent climate-related events such as droughts and severe weather; and modelled potential future impacts of climate on GDP or economic losses in a given year (e.g. 2030 or 2050). The information is also reported in the context of national circumstances, climate impacts and/or needs depending on the Party reporting.

21. As noted in paragraph 5 above, data and information on needs expressed in national reports are dynamically changing and, therefore, may be incomplete. While the number of needs and costed needs communicated via national reports in some regions are higher than in others, this does not mean that these regions have no or less needs. Rather, this may be due to the lack of available data, tools and capacity to determine and cost needs. Therefore, the number of needs and the costed needs compiled from national reports available as at the time of preparation of the first NDR should not be used to draw comparisons of the actual needs across regions.

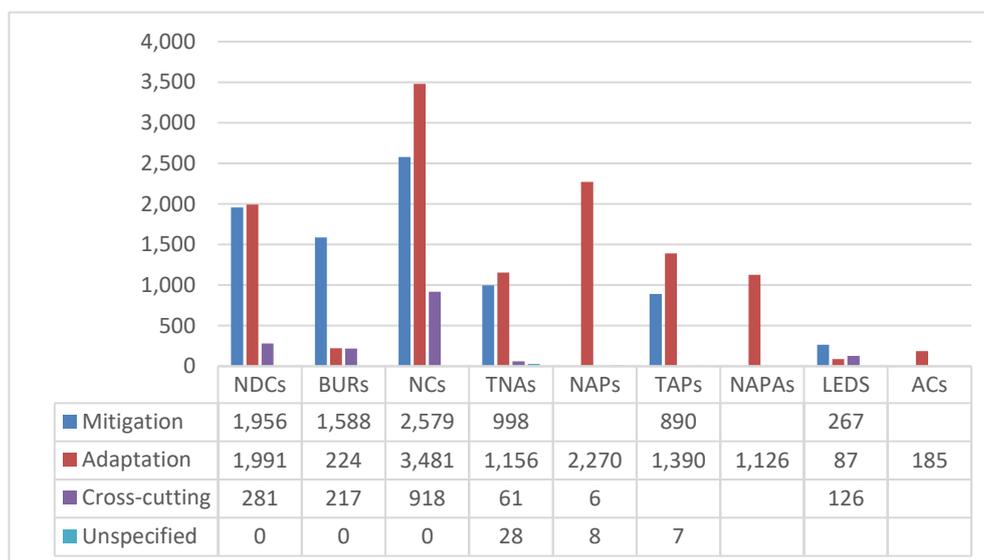
(ii) *Insights from qualitative data on needs*

Thematic distribution

Figure 2

**Number of needs expressed by developing countries by theme, region, means of implementation and sector**

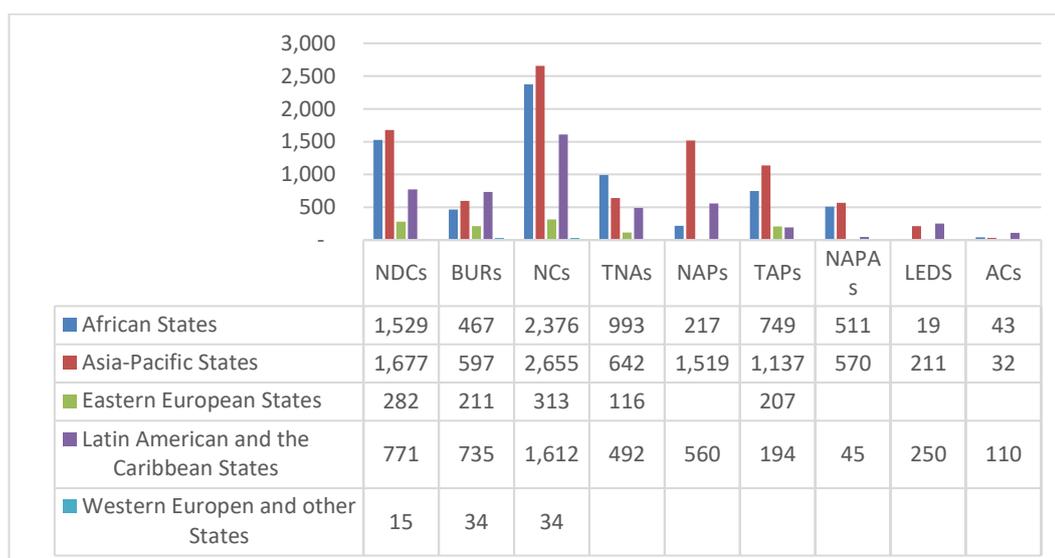
**Figure 2.1: By theme**



22. Overall, needs related to adaptation are mentioned more often than mitigation, in all report types, except in the cases of BURs and LEDS, indicating a greater attention for supporting developing countries' expressed adaptation needs. For example, as shown in Figure 2.1 above, NDCs include 1,991 needs for adaptation and 1,956 for mitigation.

Regional distribution

**Figure 2.2: By region**

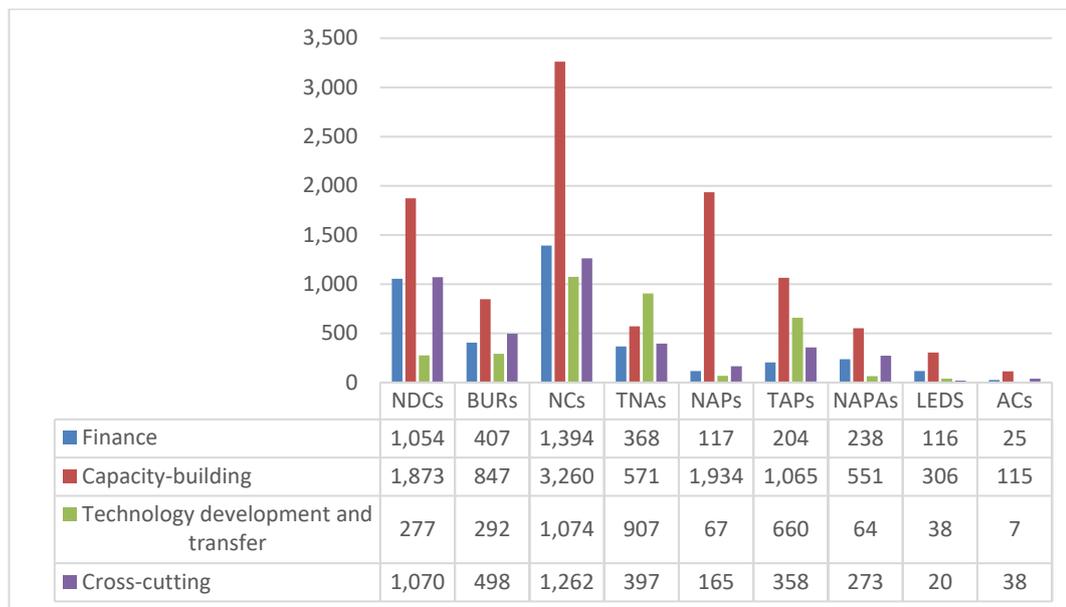


23. When the number of expressed needs across the nine national report types is considered, the Africa and Asia-Pacific regions have comparable numbers of needs across national reports with broad thematic and sectoral coverage such as BURs, NCs and NDCs, and only comparable with Latin America and the Caribbean in the case of BURs. Developing countries 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 countries in Latin America and the Caribbean and in Eastern Europe expressed more needs in their NCs. Countries in Latin America and the Caribbean expressed a considerable number of adaptation needs in adaptation-specific national reports (e.g. ACs and NAPs) when compared to the overall number of needs expressed in their BURs and NDCs. The Africa region expressed more needs through TNAs compared to other regions; these countries reported 993 needs compared with the 642 needs identified by countries in the Asia-Pacific region.

Means of implementation distribution

**Figure 2.3: By means of implementation**

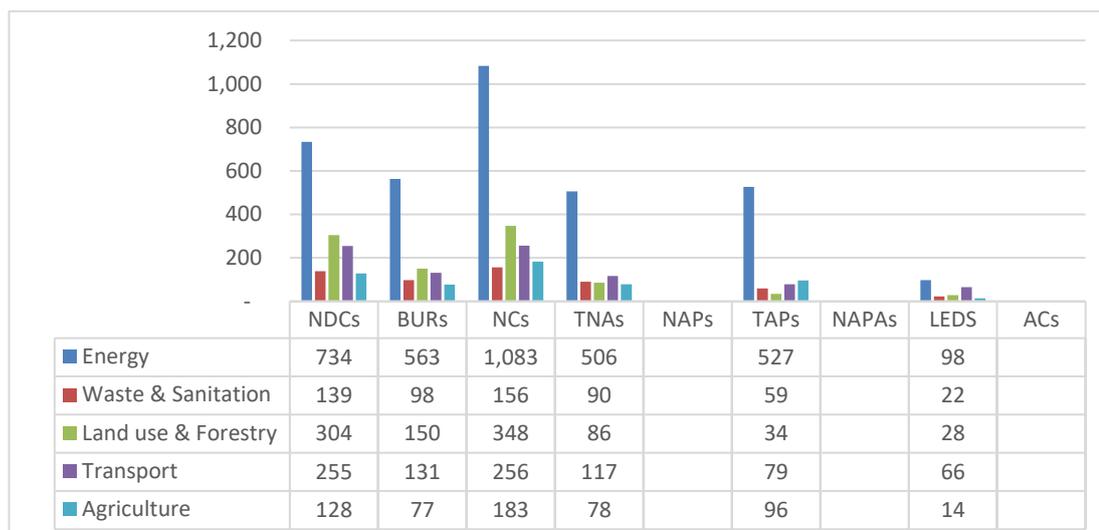


24. Qualitative data show significant prevalence of capacity-building and technology development and transfer needs, which in part, may be due to the resources developing countries can access to support the identification of these needs. The number of capacity-building needs is higher than finance needs and technology development and transfer needs identified in the nine national report types except for TNAs (see Figure 2.3). 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.

Sectors and subsectors distribution

25. On the basis of the number of mitigation needs expressed across the nine national reports, *energy* is the lead sector in climate change mitigation actions, followed by *land use and forestry*, *transport*, *agriculture* and *waste and sanitation* (see Figure 2.4).

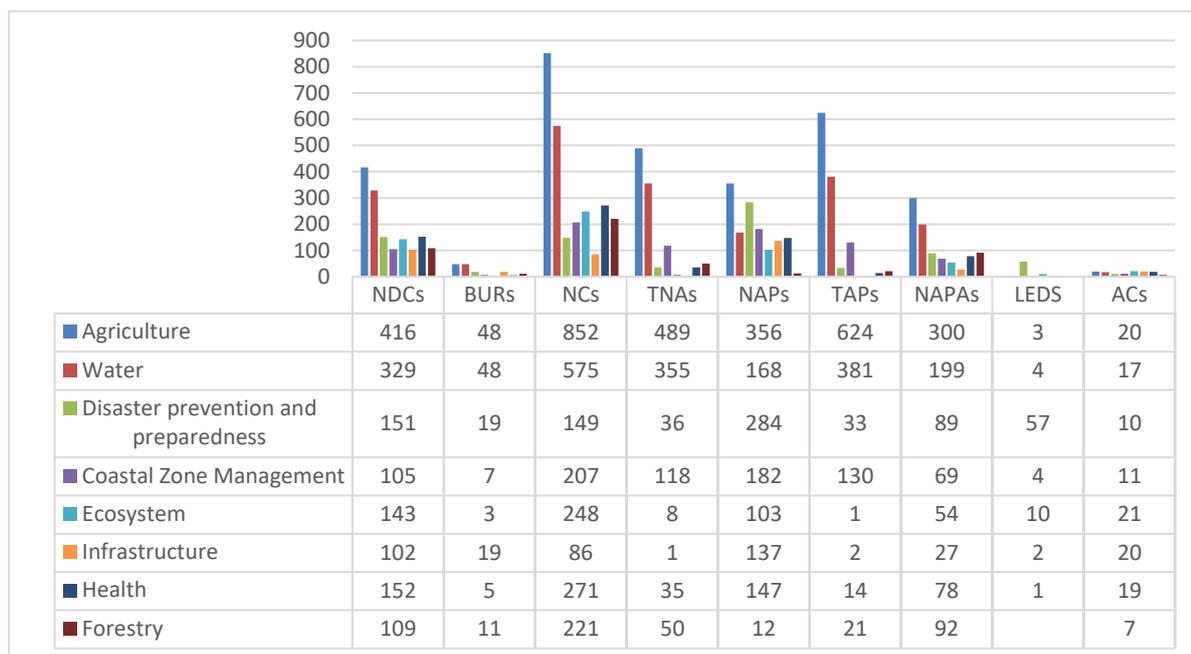
**Figure 2.4: By sector (mitigation)**



26. **Energy sector (mitigation):** The nine reports show that most needs in the energy sector relate to requests for support to energy efficiency and renewable energy subsectors, albeit with some variations between them. In NDCs, needs for renewable energy development were almost two times higher than those for energy efficiency (399 and 261, respectively), but the total nominal value of energy efficiency projects is 1.5 times larger than renewable energy projects (USD 377.22 billion and USD 198.08 billion, respectively). In BURs and NCs, more needs related to renewable energy than for energy efficiency were identified. TNAs report 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. **Forestry and land use (mitigation):** The majority of expressed needs in the forestry and land use sector represent a few densely forested countries, such as Bhutan, Brazil, Costa Rica, Congo, Ghana, Guyana, Lao People’s Democratic Republic, Malaysia, Papua New Guinea, Suriname, Tanzania and Viet Nam. This sector covers key activities such as reforestation, forest fire prevention, social forestry development, sustainable forest management, the 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 in this sector, needs related to reforestation are the largest needs expressed in financial terms.

**Figure 2.5: By sector (adaptation)**



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 in climate change adaptation actions, followed by *disaster prevention and preparedness*, *coastal zone management* and *health* (see Figure 2.5).

29. **Agriculture sector (adaptation):** Needs in the agriculture sector cover a wide variety of land uses that overlap with other key sectors. The implementation of agroforestry and irrigation, for example, also touches upon areas or land managed by the forestry and water sector. Needs related to the agriculture sector are crop diversification, the development of resistant crops, land and soil management, livestock management and fisheries and aquaculture.

30. **Water sector (adaptation):** Needs in the water sector are dominated by the need for water distribution infrastructure, water harvesting and irrigation. Other types of needs 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 reports.

(iii) *Other areas of needs*

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

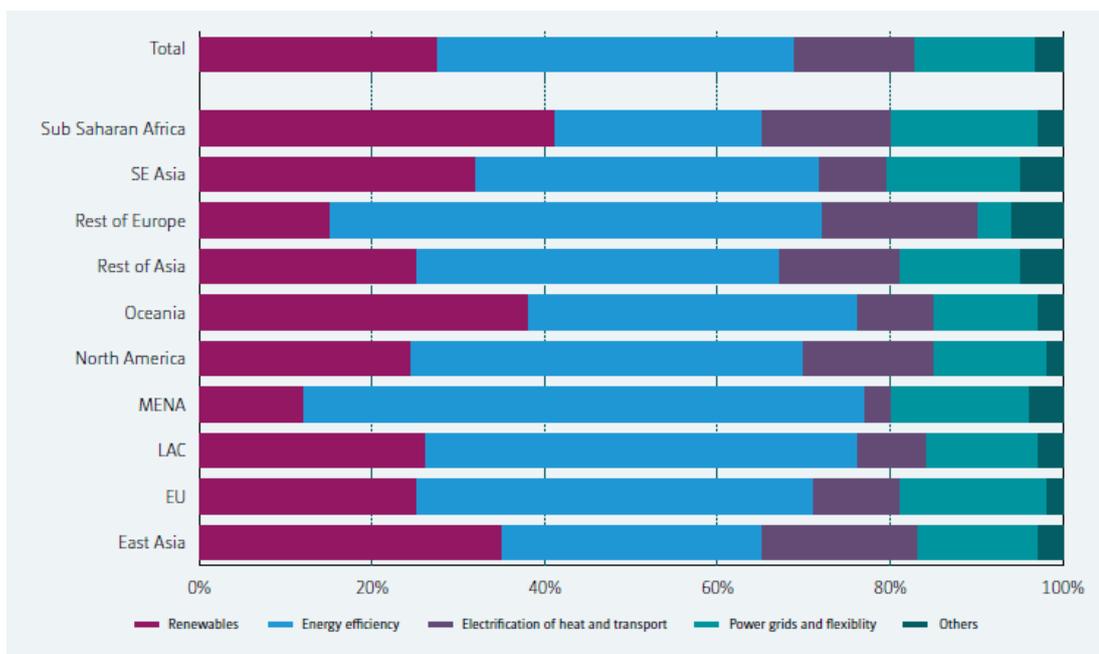
32. Some reports that expressed needs for policy development were linked to the Sustainable Development Goals (SDGs) and to the Addis Ababa Action Agenda (AAAA). In general, the implementation of climate actions is mainstreamed in the SDGs. However, a few reports expressed needs focussing on institutional building and policy development aiming to link climate commitments with the SDGs. For example, 1) Jordan's need to align its INDC with the SDGs and 2) 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 of Environment and Sustainable Development.

(b) **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 or 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 to

USD 4.7 trillion in annual energy-related investment needs globally (McCollum et al 2018, IEA, 2020, IRENA, 2020); investment opportunities based on stated national plans and targets including and beyond NDCs, ranging from USD 23.8 to USD 29.4 trillion for emerging markets from 2016 to 2030 (IFC, 2017); and investment estimates for achieving conditional NDC targets using carbon prices, for example USD 715 billion in Africa (AfDB, 2021) (see Figure 3 as an example of energy investments needs identified by IRENA).

Figure 3  
**Share of annual average clean energy investments in the Transforming Energy Scenario, by region, 2016–2050<sup>9 10</sup>**



34. Reports based on energy-economy models note that developing country regions have the largest investments gaps compared to historical trends to achieve 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 with developing countries.

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

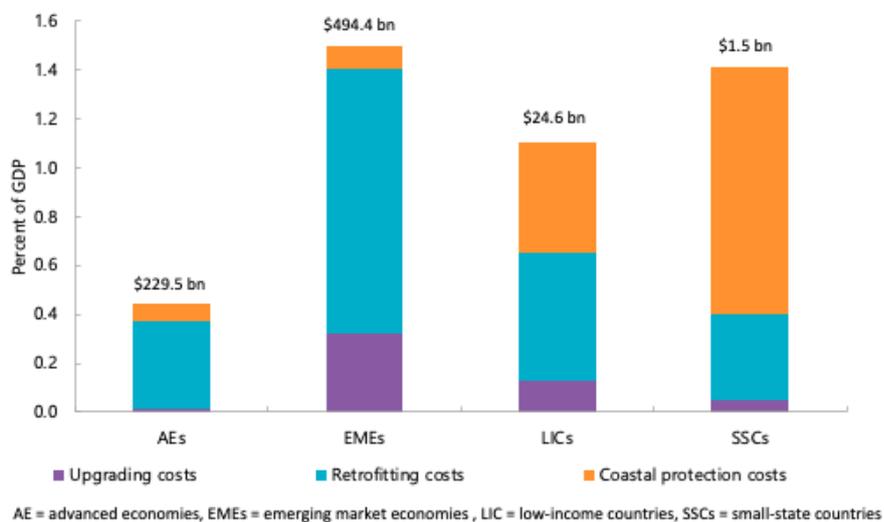
36. To make the current and future infrastructure climate resilient, annual costs as a percentage of GDP are at least double in countries with emerging market economies, low-income countries and small States compared with high-income countries, that is, 1.1 to 1.49 per cent compared with 0.45 per cent. Investment needs expressed in per cent 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, 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 (for example 3 per cent of total investment as opposed to 8 to 45 per cent) (see Figure 4).

<sup>9</sup> For the purpose of the first 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.

<sup>10</sup> IRENA (2019): Transforming the energy system – and holding the line on the rise of global temperatures. International Renewable Energy Agency. Abu Dhabi.

Figure 4

**Public investment needs for resilience of physical infrastructure by country groupings, GDP weighted average (IMF 2020<sup>11 12</sup>)**



37. The information and data generated from the national, regional and global reports are non-comparable as the reports have different time frames, objectives and scope. However, all of these reports may be viewed as complementary in offering different insights, different granularity or different processes and approaches to identifying the needs.

**2. Processes and approaches for determination of needs of developing country Parties**

**(a) National institutional arrangements**

38. Developing countries have varied institutional arrangements for identifying climate change needs, which are described in most of the official reports 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 different names such as climate change directorate, climate change units, interministerial climate change coordination committees, climate change technical working groups and climate research centres, among others.

39. A 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 the 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 interministerial committee. Among these, the interministerial committee is the most inclusive and likely to provide more detailed information on needs across sectors.

<sup>11</sup> International Monetary Fund (2020): *Fiscal Monitor: Policies for the Recovery*. Washington, October

<sup>12</sup> See footnote 9 above.

**(b) Needs identification process**

Figure 5

**Common steps adopted by the country's committees/unit for identifying climate change needs**



42. The needs identification processes of most countries start 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 5).

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

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

**(c) Processes and approaches used by other actors, namely multilateral climate funds, MDBs and UN agencies**

45. Multilateral development banks (MDBs) and UN 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 UN agencies provide financial and technical support to 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 great effort is needed and where greater impacts can be achieved. For countries that have benefited from this support in the second-generation NDCs, their reports provide more granular information on needs and capture varied sectors compared to the first-generation NDCs.

47. The multilateral climate funds established under the Convention, namely the Global Environment Facility (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 (GCF) and the Adaptation Fund (AF) also play a critical role in providing financial support to countries for facilitating their climate change needs identification process. This is particularly evident in the GCF and AF readiness support and the GEF Capacity-building Initiative for Transparency Fund, which enables countries to identify and prioritize their climate change needs.

### **3. Methodologies and underlying assumptions used in determining the needs of developing country Parties**

#### **(a) Methodologies used at the national level/by developing countries in national reports**

48. Developing countries identify adaptation and mitigation needs in the preparation of their national reports, following UNFCCC reporting guidelines and guidance, as well as, in some cases, other methodologies adapted to their national context. The approaches taken vary depending on institutional and human capacities, costs, 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 methodologies used to determine mitigation needs. The types of methodologies 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 utilize methodologies to identify both mitigation and adaptation needs.

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

51. UNFCCC reporting guidelines and guidance such as those provided for TNA preparations have facilitated the identification of needs on technology transfer and capacity-building related to mitigation and adaptation actions, through methodologies such as the Technology Needs Assessments Methodology and Guidance for Preparing a Technology Action Plan. However, the current 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 based on methodologies developed for application at the national or international level.

52. Methodologies used by developing countries to determine mitigation needs can be distinguished between 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 focused on cross-cutting, energy, GHG inventory preparation, waste, transport, agriculture, forestry, buildings 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 per sector. Methodologies applied to determine adaptation needs mainly focused on the agriculture, ecosystems and biodiversity, water and cross-cutting sectors.

#### **(b) Methodologies used at the regional and global level**

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

### **4. Challenges, opportunities and gaps in determining the needs of developing country Parties**

#### **(a) Opportunities**

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

56. A number of platforms have been established by various institutions including UN agencies and MDBs. These platforms offer a good opportunity for developing countries to

share their experiences and good practices in the needs identification process. Most developing countries are already using these platforms to share their experiences.

57. Several initiatives have been established that can aid in the needs identification process. These initiatives include the establishment of emission inventories, which offer 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.

**(b) Challenges**

*(i) 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 where reporting overlaps exist with a view to avoiding double counting in the aggregation and presentation of data.

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

(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 country. This increases the risk of double counting as cost estimates may be reported in one report by sector while in another report they may be indicated by activity, notwithstanding that 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 quantified 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. Furthermore, 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 referred to, may impact the interpretation of data. The needs are dynamic 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 country's needs. Furthermore, 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 as reported by developing countries in their national reports, different countries 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 or not the same amounts of costed needs apply.

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

(a) Data gap analysis and identification of areas for improvement;

(b) Harmonization of data sets used for estimating the global total of needs 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.

*(ii) Challenges experienced by developing countries*

61. Institutional coordination was highlighted as a major challenge in the needs determination process. The coordination challenge affected needs identification between

sectors and between levels of governance, that is, local level and national level. One of the cited drivers of limited coordination was the lack of specialized institutions within ministries with the mandate to spearhead climate change actions, as well as 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 such actions cannot always be included in short-term projects, they require long-term interventions that are difficult to estimate in monetary value.

**(c) Gaps**

63. Developing countries have taken significant steps to improve their needs determination processes 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 levels constitutes one of the major gaps identified by developing countries. As a result, many developing countries provide cost estimates for overall needs rather than as thematic or sector disaggregates.

65. The lack of specialized national institutions to spearhead the Convention's means of implementation such as technology development and transfer and capacity-building limits the ability of some developing countries to continuously track needs 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 various levels of detail across countries. Where such guidance was available, for instance for TNAs, the needs are identified at higher level of detail compared with needs communicated in other national reports.

**(d) Insights into determining needs using available resources: country case studies and experiences**

67. Country case studies have exemplified 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 costs identified needs and turning 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.

**(e) Co-benefits related to addressing the needs of developing country Parties, such as 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 countries in this report are taking action towards addressing 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 countries refer to the AAAA provision of mobilizing and aligning local resources to 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) *Encourages* 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) *Encourages* developing country Parties to share best practises on determining needs, including the institutional capacity conducive to determining needs;

(c) *Encourages* 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, where available, quantified data on needs;

(d) *Requests* 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) *Invites* the operating entities of the Financial Mechanism, UN 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) *Invites* 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 enhance availability of granular information on qualitative and quantitative needs;

(g) *Encourages* the operating entities of the Financial Mechanism, UN 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) *Encourages* developing country Parties to consider the insights on methodologies identified in the first NDR when costing and determining needs;

(i) *Encourages* 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) *Requests* the SCF to engage with public and private financial institutions and to disseminate the findings of the first NDR;

(k) *Invites* the constituted bodies of the UNFCCC, in particular the PCCB and the AC, to consider the insights identified in the first NDR when implementing their respective work plans;

(l) *Encourages* 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) *Encourages* the operating entities of the Financial Mechanism, UN agencies, multilateral and bilateral financial institutions and other relevant institutions to provide

financial and technical support to developing countries in updating the reporting of their qualitative and quantitative information and data on needs to be considered in subsequent NDRs, as appropriate;

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