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Problems, constraints, lessons learned and capacity-building needs in preparing national communications and biennial update reports

Updated technical paper by the Consultative Group of Experts

Summary

This updated technical paper compiles and synthesizes information on problems, constraints, lessons learned, and capacity-building needs identified in the process and preparation of national communications and biennial update reports of developing country Parties. The paper will continue to inform the work of the Consultative Group of Experts in identifying and providing technical assistance to address the needs of developing country Parties in this regard and serve as a source of lessons learned for those Parties.

Abbreviations and acronyms

BTR	biennial transparency report
BUR	biennial update report
CGE	Consultative Group of Experts
ETF	enhanced transparency framework under the Paris Agreement
GHG	greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
LDC	least developed country
MPGs	modalities, procedures and guidelines
MRV	measurement, reporting and verification
NC	national communication
NDC	nationally determined contribution
QA/QC	quality assurance/quality control
SIDS	small island developing State(s)

I. Introduction

A. Mandate

1. The Conference of the Parties, at its twenty-fourth session, decided to extend the term of the CGE for eight years, from 1 January 2019 to 31 December 2026.[1]

2. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, at its first session, decided that the CGE shall serve the Paris Agreement, starting from 1 January 2019, to support implementation of the ETF under Article 13 by, inter alia:

(a) Facilitating the provision of technical advice and support to developing country Parties, as applicable, including for the preparation and submission of their BTRs and facilitating improved reporting over time;

(b) Providing technical advice to the secretariat on the implementation of the training of technical expert review teams.[2]

B. Scope of the paper

3. In response to the mandate above and as part of its workplan for 2021,[3] the CGE agreed to continue conducting an assessment of the existing and emerging constraints and challenges, lessons learned and capacity-building needs of developing country Parties in implementing the existing MRV arrangements under the Convention and preparing for the ETF, and to update the technical paper prepared in 2020.[4]

4. This updated technical paper takes into account the following sources of information in addition to those consulted previously:

(a) An online survey[5] conducted by the CGE from 15 April to 30 June 2021 with a view to gathering more up-to-date feedback from developing country Parties on the status of implementation of the existing MRV arrangements and preparation for the ETF, including institutional arrangements in place at the national level, associated problems and constraints, lessons learned and capacity-building needs;

(b) The 16 NCs and 20 BURs submitted between 1 August 2020 and 30 June 2021;

(c) The 16 summary reports on the technical analysis of BURs published between 1 August 2020 and 30 June 2021.

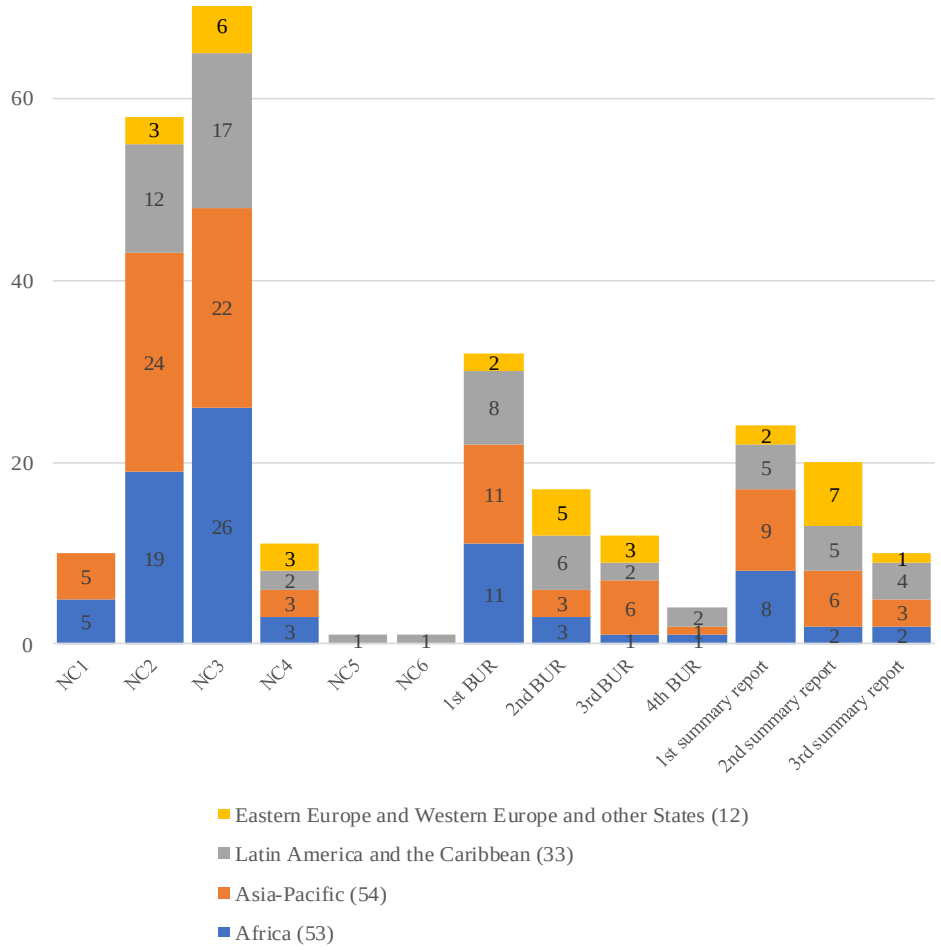
5. This paper draws on the most recent 152 NCs and 65 BURs that had been submitted by 152 developing country Parties as at 30 June 2021 and the 54 summary reports on the technical analysis of BURs that had been published as at the same date. The reporting cycles of the reports compiled and synthesized range from NC1 to NC6; from first to fourth BURs; and from first to third summary reports on the technical analysis of BURs. Figure 1 provides an overview of the reports compiled and synthesized, by reporting cycle and region.

C. Possible action by the Subsidiary Body for Implementation

6. The Subsidiary Body for Implementation will be invited to consider this paper and to provide guidance, as appropriate, to the CGE.

[1] Decision 11/CP.24, para. 1.
[2] Decision 18/CMA.1, para. 15.
[3] Available at https://unfccc.int/process/bodies/constituted-bodies/consultative-group-of-experts.
[4] FCCC/TP/2020/1.
[5] See https://unfccc.int/documents/307003.

Figure 1
Number of reports compiled and synthesized for this paper, by reporting cycle and region



Note: The figures in parentheses specify the number of developing country Parties whose reports were compiled and synthesized for each region.

II. Approach to the compilation and synthesis

7. Between August 2020 and June 2021, the CGE compiled and synthesized information on problems and constraints faced and lessons learned by developing country Parties in the process and preparation of NCs and BURs, including the challenges and needs they reported in their most recent NCs and BURs and the capacity-building needs identified in the summary reports on the technical analysis of BURs.

8. Developing country Parties reported their challenges and needs in various ways, using terms such as “problem”, “constraint”, “gap”, “barrier”, “opportunity for improvement” and “lack of” something. Incorporating information reported in a wide variety of ways into a specific data structure requires a strong analytical framework. The compilation and synthesis was therefore undertaken taking into account the following aspects of the challenges and needs reported:

(a) Theme: as per the mandatory information to be reported in NCs and BURs under the existing MRV arrangements and in BTRs under the ETF, challenges and needs were compiled and synthesized under the following themes:

(i) National GHG inventories;

(ii) Reporting on mitigation actions;

(iii) Reporting on climate change impacts and adaptation;

(iv) Reporting on support needed and received;

(v) Cross-cutting issues relating to MRV and transparency at the national level, such as raising awareness of, or political buy-in to addressing, MRV and transparency issues and developing or strengthening corresponding national systems. In particular, issues that were not classified by a Party under any of the themes listed in paragraph 8(a)(i–iv) above were categorized under this theme;

(b) Area: a developing country Party may identify and report a need when there is a gap between the current state and the optimal state, namely the minimum conditions needed to sufficiently meet the reporting requirements. Barriers to addressing such a gap may exist in different areas and can be addressed by adopting different approaches. For the purpose of the compilation and synthesis, these approaches were categorized under the following areas:

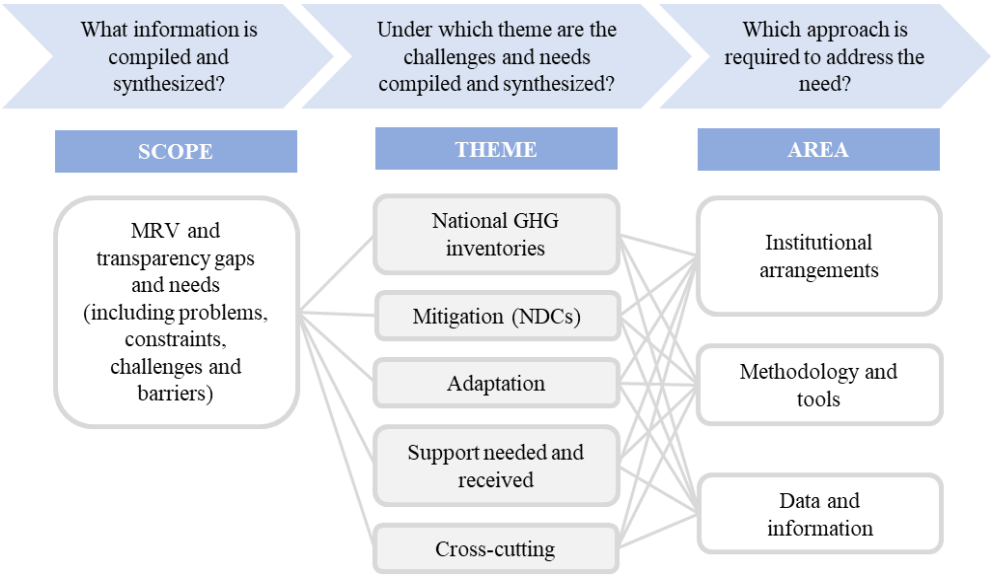
(i) Institutional arrangements, which refers to national systems, arrangements and processes to support implementation of the existing MRV arrangements and the ETF, such as the engagement of all relevant stakeholders. Issues categorized under this area include establishing and formalizing a process or working mechanism for defining roles and responsibilities and coordinating action across stakeholders; creating a designated agency or focal point to lead MRV activities; creating and strengthening stakeholder awareness of MRV and transparency; creating enabling environments such as through policy or legal arrangements that mandate the preparation of national reports; and strengthening institutional capacity to sustain and improve the MRV and transparency process over time;

(ii) Methodology and tools, which refers to the means used to enhance the technical and knowledge capacity required to prepare and report information relating to the themes. Such means include practical and easy-to-apply guidance, tools and methods; training relevant national experts to apply existing guidelines, guidance, tools and methods; and interpreting and analysing information gathered using tools and methods and translating it into information that meets the requirements of the relevant reporting guidelines. This area also covers the technological infrastructure necessary for generating the required data, such as stations, networks and equipment for monitoring, observing and technical backstopping, including scientific research and studies on developing practical country-specific tools and methods, and generating necessary data;

(iii) Data and information, which addresses various issues relating to data, ranging from availability of quality data and accessibility of data (for confidentiality reasons) to data collection and management processes. Issues pertaining to data collection processes relate to establishing and enhancing databases and data-sharing platforms and systems, while issues relating to data management processes are associated with documenting and archiving data, developing and improving QA/QC procedures, and managing uncertainty.

9. Figure 2 provides an overview of the approach to the compilation and synthesis, including the scope and aspects of the information examined.

Figure 2
Analytical framework for the compilation and synthesis of challenges and needs



10. To examine the aspects of the challenges and needs reported, as outlined in paragraph 8 above, developing country Parties (referred to as a group in the figures below as "global") were grouped as follows:

(a) By geographical region: Africa, Asia-Pacific, Latin America and the Caribbean, and Eastern Europe and Western Europe and other States;

(b) Taking into account the special circumstances of the LDCs and SIDS: one group consisting of the LDCs and SIDS, and one group consisting of other developing country Parties that are not LDCs or SIDS.

11. Inputs from the 2021 CGE survey referred to in paragraph 4(a) above were integrated into this compilation and synthesis, where relevant and applicable, using the framework outlined in figure 2.

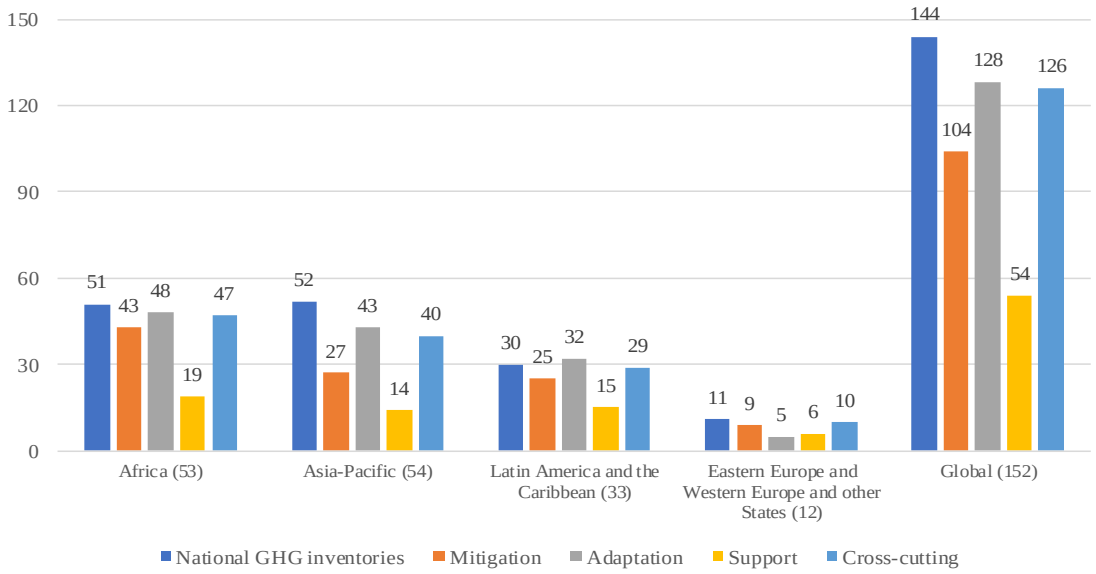
III. Results of the compilation and synthesis

A. Challenges and needs reported by developing country Parties

12. This chapter provides an overview of the challenges and needs reported by developing country Parties, broken down by theme and area and then disaggregated by region and group of developing country Parties listed in paragraph 10 above.

13. Figure 3 shows the number of developing country Parties, both regionally and globally, that reported one or more challenges and needs under each theme. At the global level, challenges and needs related to national GHG inventories were reported by the highest number of Parties (144, or 95 per cent of the Parties whose reports were compiled), followed by reporting on climate change impacts and adaptation (128 Parties, or 84 per cent) and cross-cutting issues (126 Parties, or 83 per cent). For Latin America and the Caribbean, as opposed to the other regions, the highest number of Parties reported challenges and needs associated with reporting on climate change impacts and adaptation, followed by national GHG inventories.

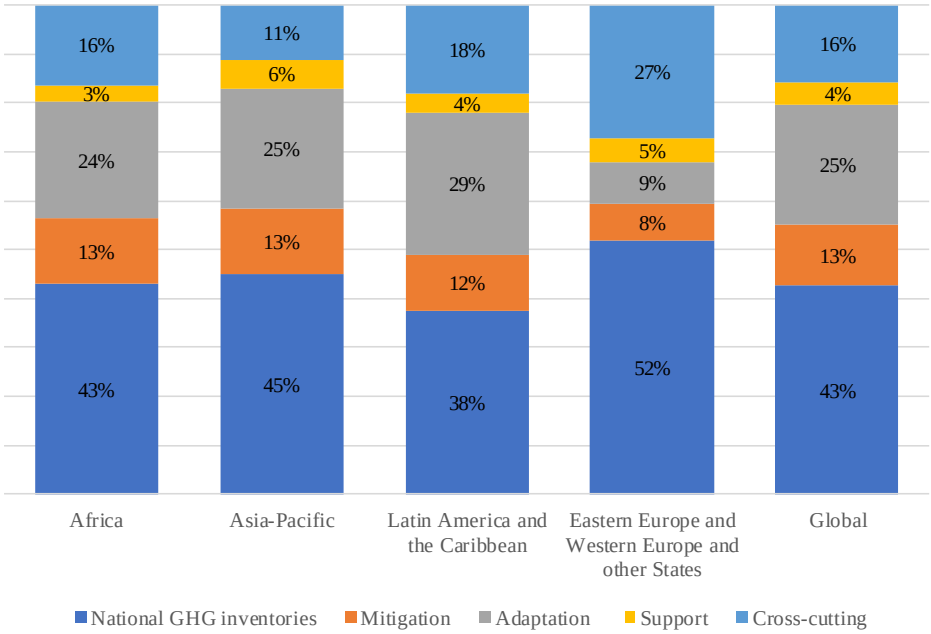
Figure 3
Number of developing country Parties that reported one or more challenges and needs under each theme, by region and globally



Note: The figures in parentheses specify the number of developing country Parties whose reports were compiled and synthesized, by region and globally.

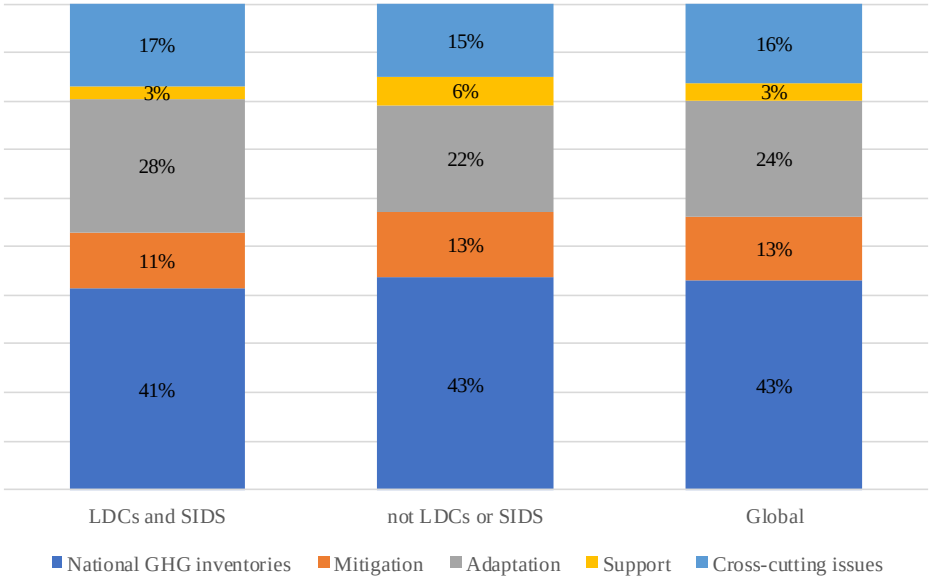
14. The themes under which challenges, and needs were reported differed by region. Figure 4 shows the thematic breakdown of the challenges and needs reported by developing country Parties, by region and globally. Although there were similar patterns in the order by frequency of the reporting of challenges and needs under the different themes, the exact share of each theme as a percentage of the total challenges and needs identified varied across the regions. For example, for Asia-Pacific, a significant percentage of the challenges and needs reported related to national GHG inventories (45 per cent), with issues pertaining to reporting on mitigation actions accounting for around 13 per cent. For Eastern Europe and Western Europe and other States, issues pertaining to national GHG inventories accounted for 52 per cent of the challenges and needs reported, followed by cross-cutting issues at 27 per cent.

Figure 4
Thematic breakdown of challenges and needs reported, by region and globally



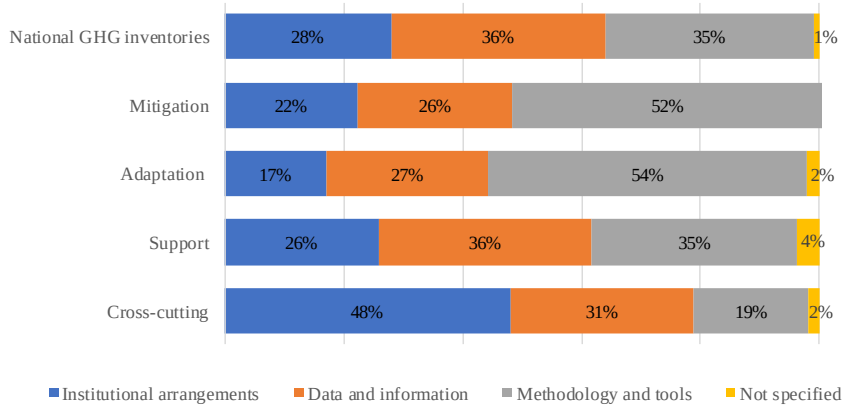
15. The thematic breakdown of challenges and needs reported differed between the LDCs and SIDS and other developing country Parties that are not LDCs or SIDS. The LDCs and SIDS reported a 6 per cent higher share of challenges and needs associated with reporting on climate change impacts and adaptation than other developing country Parties. Figure 5 shows the thematic breakdown of the challenges and needs reported, by group of developing country Parties.

Figure 5
Thematic breakdown of challenges and needs reported, by group of developing country Parties and globally



16. The breakdown of areas in which challenges and needs were identified also differed by theme, as shown in figure 6. The reporting of issues related to reporting on support needed and received and to national GHG inventories showed a similar pattern; while the majority of challenges and needs associated with reporting on mitigation actions and climate change impacts and adaptation pertained to methodology and tools.

Figure 6
Breakdown of areas in which challenges and needs were identified, by theme



B. Preparing national greenhouse gas inventories

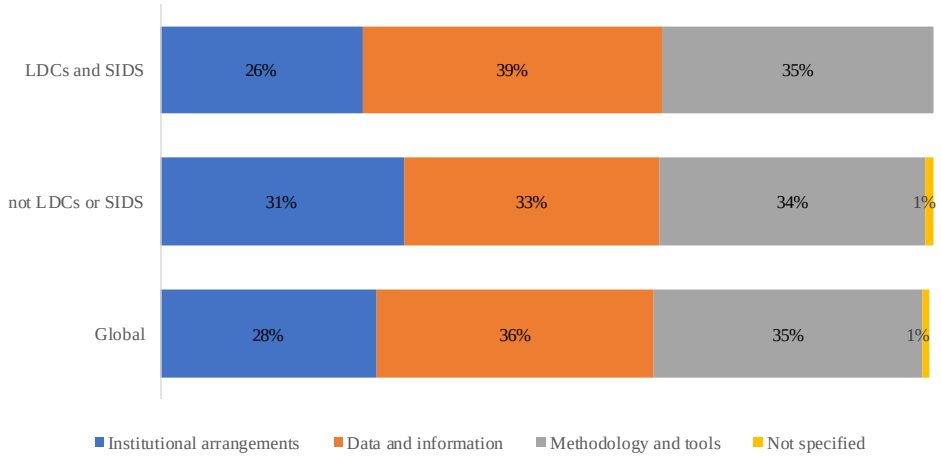
17. With regard to preparing national GHG inventories, 36 per cent of the challenges and needs reported related to data and information, followed by methodology and tools (35 per cent) and institutional arrangements (28 per cent). Table 1 summarizes by category the identified issues in preparing national GHG inventories.

Table 1
Categories of identified issues in preparing national greenhouse gas inventories

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*
Data and information	**36**
Data collection process (including establishment of a database, data-sharing system and web-based knowledge management platform)	15
Availability of quality data	15
Data management process (including documentation, archiving, QA/QC protocols and uncertainty management procedures)	5
Accessibility of data for confidentiality reasons	1
Methodology and tools	**35**
Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training	13
Technical backstopping	13
Practical guidance, tools and methods	6
Technical capacity (knowledge capacity) to interpret, analyse and translate data and information gathered using tools and methods, etc., including training	2
Technological infrastructure	1
Institutional arrangements	**28**
Coordination across sectors and institutions to collect and share data	10
Institutional capacity to sustain and improve the MRV and transparency process over time	8
Leadership (e.g. an entity appointed to undertake and coordinate data collection and sharing)	3
Policy or legal arrangements that mandate the preparation of national reports	3
Stakeholder awareness, especially in the private sector	2
Definition of roles and responsibilities across the institutions involved	2
Not specified	**1**
Total	**100**

18. The percentage breakdown by area of reported challenges and needs related to preparing GHG inventories differed by group of developing country Parties, although there were similar patterns in the order by frequency of the reporting of challenges and needs in those areas. The LDCs and SIDS reported a slightly higher share of issues relating to data and information. Figure 7 provides a breakdown of the areas in which challenges and needs relating to preparing national GHG inventories were identified by the different groups of developing country Parties. Box 1 provides examples from the categories with the three highest shares of the identified issues associated with preparing national GHG inventories.

Figure 7
Breakdown of areas in which challenges and needs relating to preparing national greenhouse gas inventories were identified, by group of developing country Parties



Box 1
Examples from categories of issues associated with preparing national greenhouse gas inventories

Data collection process: For many developing country Parties, it is a significant challenge to deal with data that are outdated, incomplete or incompatible and set up a database that would make this task easier. Several expressed the need to harmonize and standardize the data collection process and prioritize data collection for certain sectors such as agriculture, forestry and land use. Some expressed the need to improve their methodologies and procedures for gathering activity data and to develop country-specific emission factors.

Availability of quality data: Many developing country Parties stated that lack of reliable data impeded the accurate estimation of emissions. The data issues reported related to unavailability of activity data, inconsistency in reported years and inconsistency between data sources. In some cases, lack of quality data was due to an inadequate data collection process. For example, some Parties expressed that inadequate data restricted the inventory compilers to using IPCC tier 1 estimation approaches.

Technical backstopping: Many developing country Parties identified the need to obtain access to expertise or to enhance the existing expertise in the country to, for example, conduct uncertainty analysis; develop accurate estimation methodologies for all unreported source categories; develop GHG emission estimation models with local research institutes to create country-specific methodologies using bottom-up approaches for inventory preparation; introduce higher-tier methodologies for estimating GHG emissions; and increase and promote scientific research on the development of country-specific emission factors.

C. Reporting on mitigation actions

19. With regard to reporting on mitigation actions, more than half of the challenges and needs reported related to methodology and tools (52 per cent), followed by data and information (26 per cent) and institutional arrangements (22 per cent). In particular, challenges due to lack of practical guidance, tools and methods accounted for 24 per cent, followed by issues pertaining to the data collection process (13 per cent) and lack of technical capacity to apply existing guidelines, guidance, tools and methods (12 per cent). Table 2 summarizes by category the identified issues in reporting on mitigation actions.

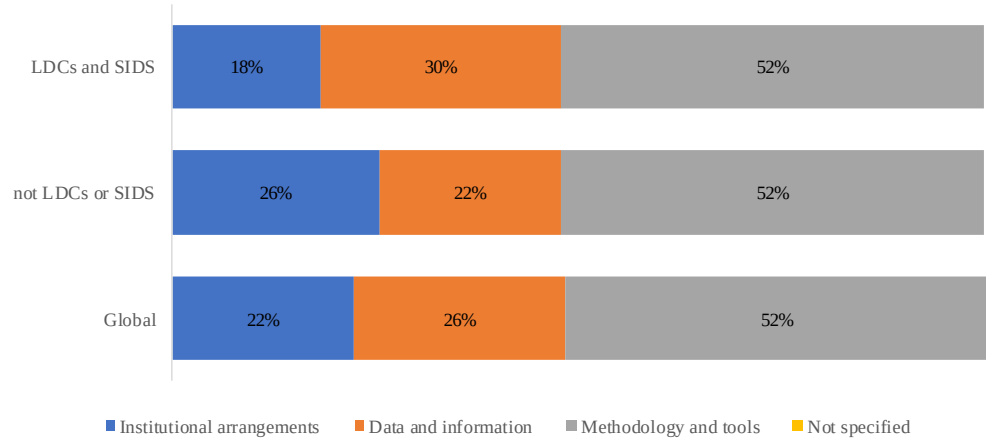
Table 2
Categories of identified issues in reporting on mitigation actions

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*
Methodology and tools	**52**
Practical guidance, tools and methods	24
Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training	12
Technical backstopping	8
Technical capacity (knowledge capacity) to interpret, analyse and translate data and information gathered using tools and methods, etc., including training	7
Technological infrastructure	1
Data and information	**26**
Data collection process (including establishment of a database, data-sharing system and web-based knowledge management platform)	13
Accessibility of data for confidentiality reasons	8
Data management process (including documentation, archiving, QA/QC protocols and uncertainty management procedures)	4

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*
Availability of quality data	1
Institutional arrangements	**22**
Coordination across sectors and institutions to collect and share data	8
Institutional capacity to sustain and improve the MRV and transparency process over time	6
Policy or legal arrangements that mandate the preparation of national reports	2
Stakeholder awareness, especially in the private sector	3
Definition of roles and responsibilities across the institutions involved	2
Leadership (e.g. an entity appointed to undertake and coordinate data collection and sharing)	1
Total	**100**

20. The percentage breakdown by area of reported challenges and needs related to reporting on mitigation actions differed by group of developing country Parties, although there were similar patterns in the order by frequency of the reporting of challenges and needs in those areas. All groups reported a 52 per cent share of issues relating to data and information. There is a consistent need to address issues around the use of methodologies and tools for mitigation assessment. Figure 8 provides a breakdown of the areas in which challenges and needs related to reporting on mitigation actions were identified by the different groups of developing country Parties. Box 2 provides examples from the categories with the three highest shares of the identified issues associated with reporting on mitigation actions.

Figure 8
Breakdown of areas in which challenges and needs related to reporting on mitigation actions were identified, by group of developing country Parties



Box 2
Examples from categories of issues associated with reporting on mitigation actions

Practical guidance, tools and methods: Many developing country Parties encountered difficulties in enhancing the information reported in their subsequent NCs or BURs with respect to mitigation. Some of them expressed the need for practical guidance and access to tools and methods that could, for example, assist them in estimating potential quantitative mitigation goals and identifying progress indicators for each mitigation action; using existing or developing methodologies for estimating the results and impacts of individual mitigation actions; and using existing or developing methods and/or practical guidelines for tracking progress of implementation and achievement of NDCs.

Data collection process: In some developing country Parties, data collection processes for reporting on mitigation actions are not integrated into the regular data collection processes and systems of the related agencies, which impedes standardized and effective data collection and compilation. Similarly, several Parties highlighted the need to establish a mechanism to facilitate the systematic collection of information among stakeholders to enable the tracking of progress of mitigation actions in all sectors. Further, Parties highlighted the need to design a data collection process or system that meets data requirements for different models and software.

Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training: Many developing country Parties reported limited technical capacity or skills in relation to using the tools and methods available, especially with regard to developing mitigation and reference scenarios, projections and economic analyses for mitigation options and identifying viable technological options. Several Parties highlighted the need to enhance the national capacity to report on mitigation actions, such as by establishing training programmes in order to address the skills shortage in using modelling tools such as the Long-range Energy Alternatives Planning system; enhance understanding of the reporting requirements under the ETF; use modelling tools for sectors such as agriculture, forestry and waste; enhance technical capacity to develop progress indicators; and establish a mechanism to facilitate the systematic collection of information among stakeholders to enable the tracking of progress of mitigation actions in all sectors.

D. Reporting on climate change impacts and adaptation

21. With regard to reporting on climate change impacts and adaptation, more than half of the challenges and needs reported related to methodology and tools (54 per cent), followed by data and information (27 per cent) and institutional arrangements (17 per cent). In particular, the need for technical backstopping, including scientific research and studies, accounted for 22 per cent, followed by challenges in the data collection process (15 per cent) and challenges with technological infrastructure (12 per cent). Table 3 summarizes by category the identified issues in reporting on climate change impacts and adaptation.

Table 3
Categories of identified issues in reporting on climate change impacts and adaptation

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*[a]
Methodology and tools	**54**
Technical backstopping	22
Technological infrastructure	12
Practical guidance, tools and methods	12
Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training	5

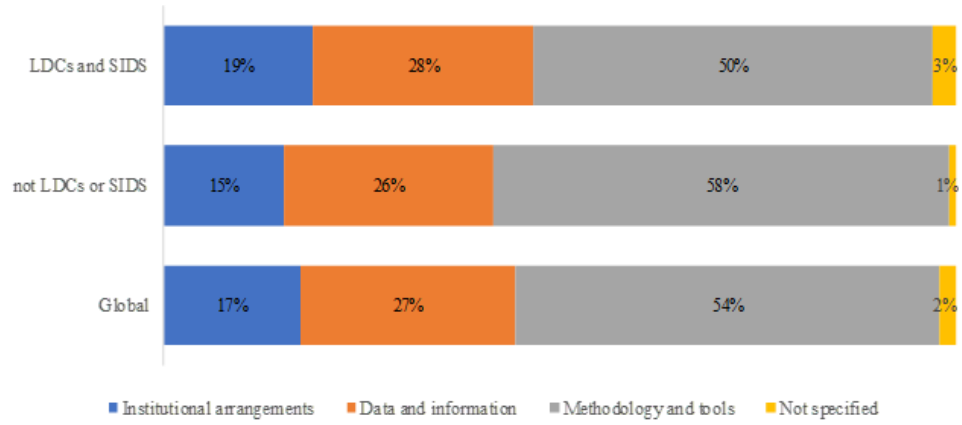
Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*[a]
Technical capacity (knowledge capacity) to interpret, analyse and translate data and information gathered using tools and methods, etc., including training	3
Data and information	**27**
Data collection process (including establishment of a database, data-sharing system and web-based knowledge management platform)	15
Availability of quality data	9
Data management process (including documentation, archiving, QA/QC protocols and uncertainty management procedures)	4
Institutional arrangements	**17**
Coordination across sectors and institutions to collect and share data	6
Institutional capacity to sustain and improve the MRV and transparency process over time	4
Leadership (e.g. an entity appointed to undertake and coordinate data collection and sharing)	3
Stakeholder awareness, especially in the private sector	2
Policy or legal arrangements that mandate the preparation of national reports	1
Definition of roles and responsibilities across the institutions involved	1
Not specified	**2**
Total	**100**

[a] The area-level percentages were calculated using exact (not rounded) values and may therefore differ from total percentages calculated with the rounded category-level percentages provided in the table.

22. The percentage breakdown by area of challenges and needs related to reporting on climate change impacts and adaptation shows similar patterns in the order by frequency of the reporting of challenges and needs in those areas and across the different groups of developing country Parties. It is notable that other developing country Parties that are not LDCs or SIDS reported a higher share of issues with methodology and tools than the LDCs and SIDS. Figure 9 provides a breakdown of the areas in which challenges and needs related to reporting on climate change impacts and adaptation were identified by the different groups of developing country Parties. Box 3 provides examples from the categories with the three highest shares of the identified issues associated with reporting on climate change impacts and adaptation.

Figure 9

Breakdown of areas in which challenges and needs related to reporting on climate change impacts and adaptation were identified, by group of developing country Parties



Box 3
Examples from categories of issues associated with reporting on climate change impacts and adaptation

Technical backstopping: Many developing country Parties highlighted the need to promote research with a view to better understanding the impacts of climate change in various sectors (e.g. biodiversity, health, water resources and agriculture) and improving impact and vulnerability assessment. The demand for studies to develop common indicators for assessing the impacts of climate change at the national and regional level, to promote integrated assessment across sectors and to develop sectoral cost–benefit analysis methods was highlighted. Several Parties pointed out the limited funding allocated to climate change research domestically and lack of international financial support. Many Parties acknowledged that the more rigorous the vulnerability and adaptation assessment is, the easier it is to identify feasible adaptation options and hence better plan adaptation measures.

Some Parties expressed the need to enhance the institutional framework and technical expertise for developing a comprehensive and integrated vulnerability (impacts and adaptation) assessment process to address challenges such as lack of updated monitoring information, poor management of land allocations, loss of critical terrestrial ecosystems significant to vulnerability and adaptation to climate change, application of a geographic information system for water resources management, monitoring and management of low-lying areas, disaster risk planning for low-lying areas and conflicting sectoral policies.

Data collection process: Some developing country Parties found that there is a gap between the data available and the data required for the existing models for vulnerability and adaptation assessment. This highlighted the need for practical, country-specific models with less complex metrics. The need to develop regional climatic models with greater spatial and temporal resolution to facilitate downscaling of climate scenarios was also identified. Some Parties highlighted the need to strengthen the capacities of their national meteorological services in terms of observation networks, the data processing and storage system, the communication and information exchange system, and human resources.

Technological infrastructure: Many developing country Parties reported the need to establish, improve or maintain technological infrastructure with a view to improving data quality and addressing data gaps. Such infrastructure includes weather forecasting centres, hydrological stations, meteorological stations and climatological observation networks. Several Parties reported that existing observation networks or stations were outdated or had been damaged by extreme weather events, and highlighted the need to improve this equipment and software to improve observation and monitoring.

E. Reporting on support needed and received

23. With regard to reporting on support needed and received, challenges and needs in the area of data and information were reported most frequently (36 per cent), followed by those in the areas of methodology and tools (35 per cent) and institutional arrangements (25 per cent). In particular, challenges due to lack of practical guidance, tools and methods (33 per cent) featured strongly, followed by lack of an adequate data collection process (30 per cent) and lack of institutional capacity to sustain and improve the MRV and transparency process over time (13 per cent). Table 4 summarizes by category the issues identified in reporting on support needed and received.

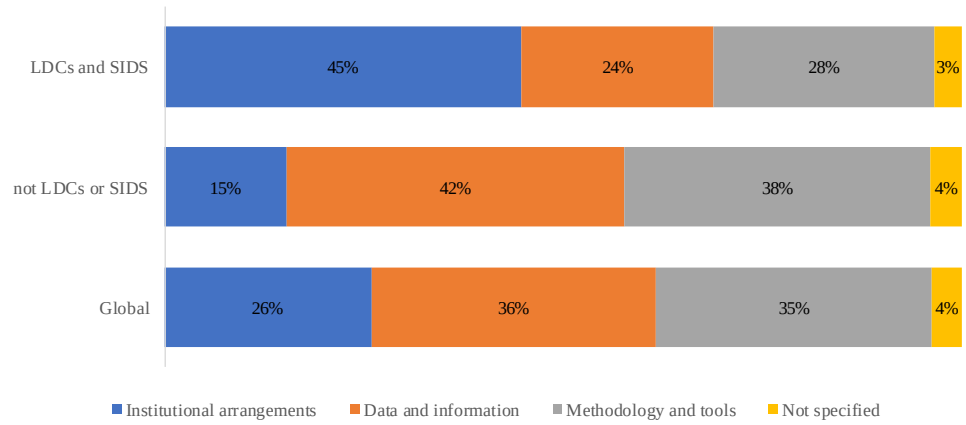
Table 4
Categories of identified issues in reporting on support needed and received

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*[a]
Data and information	**36**
Data collection process (including establishment of a database, data-sharing system and web-based knowledge management platform)	30
Availability of quality data	3
Data management process (including documentation, archiving, QA/QC protocols and uncertainty management procedures)	3
Accessibility of data for confidentiality reasons	1
Methodology and tools	**35**
Practical guidance, tools and methods	33
Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training	2
Institutional arrangements	**25**
Institutional capacity to sustain and improve the MRV and transparency process over time	13
Coordination across sectors and institutions to collect and share data	7
Leadership (e.g. an entity appointed to undertake and coordinate data collection and sharing)	3
Definition of roles and responsibilities across the institutions involved	1
Policy or legal arrangements that mandate the preparation of national reports	1
Not specified	**4**
Total	**100**

[a] The area-level percentages were calculated using exact (not rounded) values and may therefore differ from total percentages calculated with the rounded category-level percentages provided in the table.

24. The percentage breakdown by area of reported challenges and needs related to reporting on support needed and received differed by group of developing country Parties. Other developing country Parties that are not LDCs or SIDS reported a higher share of issues relating to data and information and methodology and tools, but a much lower share of issues pertaining to institutional arrangements than the LDCs and SIDS. Figure 10 provides a breakdown of the areas in which challenges and needs relating to reporting on support needed and received were identified by the different groups of developing country Parties. Box 4 provides examples from the categories with the three highest shares of the identified issues associated with reporting on support needed and received.

Figure 10
Breakdown of areas in which challenges and needs relating to reporting on support needed and received were identified, by group of developing country Parties



Box 4
Examples from categories of issues associated with reporting on support needed and received

Practical guidance, tools and methods: Several developing country Parties noted that there is no coherent or common definition of climate finance or approach to classifying, monitoring and reporting on climate finance, with publications and reports on this topic often inconsistent. The need was highlighted for a clear methodology and guidance to ensure that climate finance is accounted for, assessed and reported consistently. Further, several Parties highlighted the need for nationally endorsed definitions of finance, capacity-building and technology transfer to create a common understanding of aspects to consider when tracking support, for the purposes of both international reporting and national decision-making. Some Parties expressed the need to strengthen the capacity of national entities to identify and report technology needs for implementing territorial and sectoral climate change management plans, including identifying criteria for categorizing and differentiating financial, technical and technology needs in a standardized manner.

Data collection process: Many developing country Parties found it challenging to collect data and information on support needed and received owing to lack of a standardized data collection process and the relevant data being dispersed across various agencies (such as ministries, private sector organizations, research and academic institutes, and civil society organizations). Some Parties expressed the need to collect and systematize information on financial resources, technology transfer, capacity-building and technical support received from international support providers and developed country Parties for activities relating to climate change, including for preparing NCs and BURs.

Institutional arrangements: Several developing country Parties expressed the need to strengthen institutional arrangements for the continuous provision of higher-quality data on support. They see value in this as it could serve as a basis for assessing constraints and gaps in support to unlock barriers to implementing mitigation and adaptation action. Some Parties also expressed the need to enhance expertise and institutional arrangements for mobilizing funding to support national climate change plans.

F. Cross-cutting issues

25. With respect to cross-cutting issues, 48 per cent of the challenges and needs reported related to institutional arrangements, followed by data and information (31 per cent) and methodology and tools (19 per cent). In particular, challenges and needs pertaining to lack of an adequate data collection process were most frequently reported (23 per cent), followed by the need to enhance institutional capacity to sustain and improve the MRV and transparency process over time (17 per cent) and the need to enhance coordination across sectors and institutions to collect and share data (9 per cent). Table 5 summarizes the identified cross-cutting issues by category.

Table 5
Categories of identified cross-cutting issues

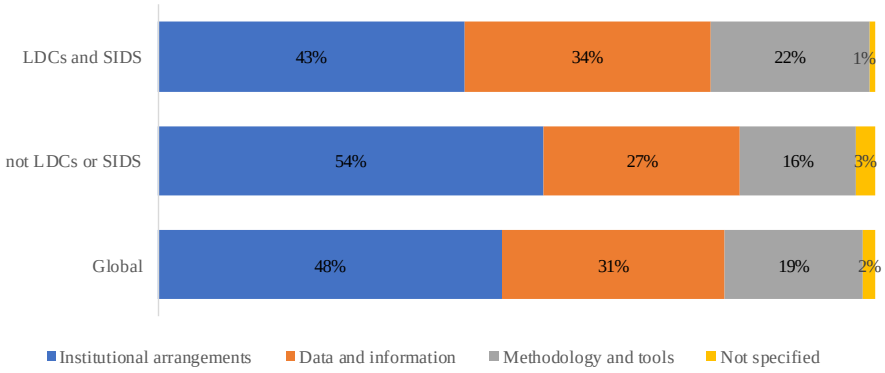
Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*[a]
Institutional arrangements	**48**
Institutional capacity to sustain and improve the MRV and transparency process over time	17
Coordination across sectors and institutions to collect and share data	9
Policy or legal arrangements that mandate the preparation of national reports	9

Area and category of issues (lack thereof or insufficient)	*Percentage of total reported issues under theme*[a]
Leadership (e.g. an entity appointed to undertake and coordinate data collection and sharing)	8
Definition of roles and responsibilities across the institutions involved	4
Stakeholder awareness, especially in the private sector	2
Data and information	**31**
Data collection process (including establishment of a database, data-sharing system and web-based knowledge management platform)	23
Data management process (including documentation, archiving, QA/QC protocols and uncertainty management procedures)	4
Availability of quality data	3
Accessibility of data for confidentiality reasons	1
Methodology and tools	**19**
Technical capacity (knowledge capacity) to apply guidelines, guidance, tools and methods, including training	7
Practical guidance, tools and methods	6
Technical backstopping	4
Technological infrastructure	1
Technical capacity (knowledge capacity) to interpret, analyse and translate data and information gathered using tools and methods, including training	1
Not specified	**2**
Total	**100**

[a] The area-level percentages were calculated using exact (not rounded) values and may therefore differ from total percentages calculated with the rounded category-level percentages provided in the table.

26. The percentage breakdown by area of challenges and needs reported under this theme differed by group of developing country Parties, although there were similar patterns in the order by frequency of the reporting of challenges and needs in the areas. Other developing country Parties that are not LDCs or SIDS reported an approximately 11 per cent higher share of issues related to institutional arrangements than the LDCs and SIDS. Figure 11 provides a breakdown of the areas in which challenges and needs relating to cross-cutting issues were identified by the different groups of developing country Parties. Box 5 provides examples from the categories of identified cross-cutting issues.

Figure 11
Breakdown of areas in which challenges and needs relating to cross-cutting issues were identified, by group of developing country Parties



Box 5
Examples from categories of cross-cutting issues

Data collection process: Several developing country Parties expressed the need to further enhance the data collection process. A key need is to automate the process and build an MRV system that encompasses all areas (support, mitigation, adaptation). An improved system would enhance the reporting of climate-related information on a predictable and continuous basis, provide a basis for conducting censuses and surveys to close data gaps, help with the sharing of information with stakeholders in a concise and consolidated manner, and help to explore synergies with other national reporting needs such as on progress towards the Sustainable Development Goals.

Institutional capacity to sustain and improve the MRV and transparency process over time: Many developing country Parties reported that national reports were prepared on an ad hoc basis and did not result in a permanent process or team of national experts being set up. Recognizing the enhanced reporting requirements under the ETF, however, those Parties reported a strong need to establish a permanent framework to enable the preparation of national reports in a sustainable and timely manner and thus improve the quality of reporting over time. With this in mind, the need to establish or maintain a permanent team of experts was highlighted, along with the need to continue capacity-building efforts. In particular, a high staff turnover rate in government agencies was considered to have a key impact on longer-term MRV activities. Therefore, Parties reported the need to develop a dynamic training plan for existing, new and incoming technical experts involved in the reporting process and to ensure that technical capacity for different sectoral reporting is retained over time, while ensuring an adequate level of financial resources. Some Parties highlighted the need to address the technical capacities that are lacking in line ministries and stakeholders that prevent them from actively participating in providing information for national reports.

Coordination across sectors and institutions to collect and share data: Many developing country Parties reported challenges due to lack of a coordination mechanism for data-sharing among various stakeholders, which sometimes resulted in conflicts between different ministries and agencies.

Formalizing institutional arrangements for data provision will help enhance data quality and avoid delays in data submission. Several developing country Parties reported finding it important to communicate to stakeholders the mutual benefits arising from MRV activities in order to incentivize their engagement and boost commitment. Some Parties identified the need to improve institutional coordination structures at the cross-ministerial level (horizontal) and between national and subnational authorities (vertical).

27. The 2021 CGE survey included a section aimed at gauging the emerging needs of developing country Parties in relation to the ETF. Participants were asked to indicate the following:

(a) Their level of knowledge of the MPGs: 59 per cent of the respondents indicated that they were familiar with the MPGs but would need more guidance and detailed information to identify needs for implementing the ETF, while 25 per cent indicated that they were knowledgeable enough to identify needs and start planning for ETF implementation. The remaining 16 per cent indicated that they had limited knowledge;

(b) The status of planning for reporting under the ETF: 41 per cent of participants indicated that their country has started planning;

(c) Steps taken thus far in preparing the first BTR, due on or before 31 December 2024. The respondents that described such steps mentioned the following:

(i) Their country is working with an external support provider to enhance the MRV system and build the requirements of the MPGs into the system;

(ii) Their country will not be developing a second BUR but will move to requesting funds for preparing its first BTR;

(iii) Gaps have been identified and a road map is being developed for preparing their country's first BTR;

(iv) The MPGs have been integrated into their country's NDC plan and MRV platform;

(v) Their country is estimating the resource and capacity needs for the relevant national focal point to be able to implement the MPGs;

(d) Key capacity-building needs that their country identified for preparing and reporting information in the thematic areas of the BTR, namely the national GHG inventory; tracking progress of implementation and achievement of NDCs; climate change impacts and adaptation; and support needed and received. For the national GHG inventory, methodology and tools and data and information featured strongly as key areas for capacity-building, whereas, under the other themes, methodology and tools and institutional arrangements featured strongly as key areas for capacity-building. A more detailed summary of the key areas of need identified under each theme, including examples, is contained in the survey;

(e) Key areas of capacity-building that their country could most benefit from with respect to ETF implementation. The most frequently selected area was methods and/or practical guidelines for tracking progress of implementation and achievement of NDCs, followed by understanding the relationship between MRV and transparency of climate action and support, and tracking and monitoring Sustainable Development Goal indicators, and understanding the commonalities and differences between the existing MRV arrangements and the ETF, followed by formalizing the data collection and management process and using the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

28. Respondents to the survey were also requested to indicate whether the pandemic has had an impact on their country's NC and BUR preparation. Approximately 80 per cent of respondents indicated that the pandemic has had an impact on their country's NC and/or BUR preparation. The impacts ranged from delays or difficulties in scheduling various meetings due to lockdown restrictions; delays or difficulties in engaging in activities that feed into the NC and BUR preparation process, such as collecting data from stakeholders and hiring consultants to undertake data collection or data analysis activities; internal delays in reviewing, finalizing or clearing documents due to resource constraints or resource diversion to pandemic-related work; and prohibitive costs of Internet data to work from home while complying with lockdown restrictions. Some participants indicated that stakeholder consultations held virtually were not as effective as in-person meetings.