



CGE Technical Paper 2022

Distilled

Updated technical paper on problems, constraints, lessons learned and capacity-building needs in preparing national communications and biennial update reports



October 2022

Consultative Group of Experts

Overview

Transparency

Transparency of climate action and support under the UNFCCC process includes measurement, reporting and verification under the Convention and the enhanced transparency framework under the Paris Agreement. Transparency is key to achieving the goals set out in the Convention and the Paris Agreement.

While countries have been engaging in the existing measurement, reporting and verification arrangements under the Convention for many years, the Paris Agreement established the enhanced transparency framework that applies common modalities, procedures and guidelines for all Parties with “flexibility... to those developing country Parties that need it in the light of their capacities”.

Countries are at different starting points in terms of their capacities and experience in preparing for and implementing the enhanced transparency framework. While the existing domestic measurement, reporting and verification systems will provide a solid basis for countries to prepare for and implement the enhanced transparency framework, capacity-building for developing country Parties will remain crucial to ensure that all countries are able to engage fully and effectively in the new and enhanced processes and requirements established under the enhanced transparency framework.

Consultative Group of Experts Technical Paper 2022 Distilled

The Consultative Group of Experts is an expert group mandated to assist developing country Parties, through technical advice and support, improve their capacities to implement the existing measurement, reporting and verification arrangements under the Convention and the enhanced transparency framework under the Paris Agreement in a timely and sustainable manner.

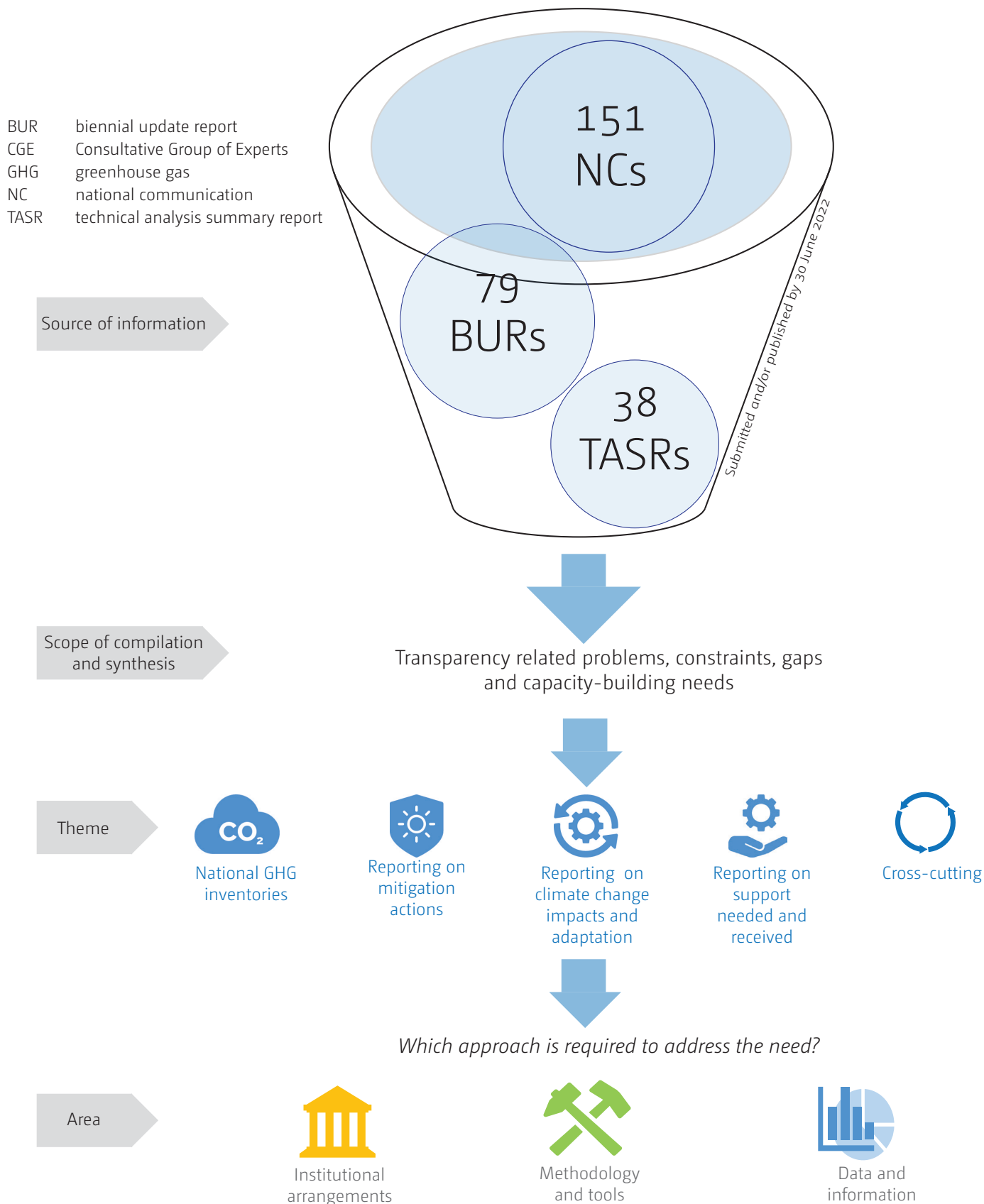
With a view to providing technical assistance and support that responds to the needs of developing country Parties in a targeted and strategic manner, the Consultative Group of Experts continues to conduct an assessment of the existing and emerging problems and constraints, lessons learned and capacity-building needs of developing country Parties in implementing the existing measurement, reporting and verification arrangements and preparing for and implementing the enhanced transparency framework and prepares a technical paper annually containing the results.

The Consultative Group of Experts Technical Paper Distilled series aims at conveying the above information in a more condensed form that is conducive to highlighting salient points that may interest a broader range of support providers, experts and practitioners. It also provides a visual presentation of the information contained in the Consultative Group of Experts updated technical paper published in 2022.

The information on the existing and emerging problems and constraints, lessons learned and capacity-building needs draws on national communications and biennial update reports submitted by developing country Parties, as well as summary reports on the technical analysis of biennial update reports.

Approach to the compilation and synthesis of the information reported by developing country Parties

The information on problems and constraints, lessons learned, and capacity-building needs identified by developing country Parties was compiled from various data sources. The scope and aspects of the information examined is illustrated in the figure below.



The information reported by the developing country Parties was also examined through the following perspectives as outlined below.

Examining the information reported by developing country Parties through the following perspectives

By geographical region:



- Africa
- Asia-Pacific
- Latin America and the Caribbean
- Eastern Europe and Western Europe and other States

Taking into account special circumstances of the Least Developed Countries (LDCs) and Small Islands Developing States (SIDS):



- Group consisting of LDCs and SIDS
- Group consisting of the other developing countries that are not LDCs or SIDS



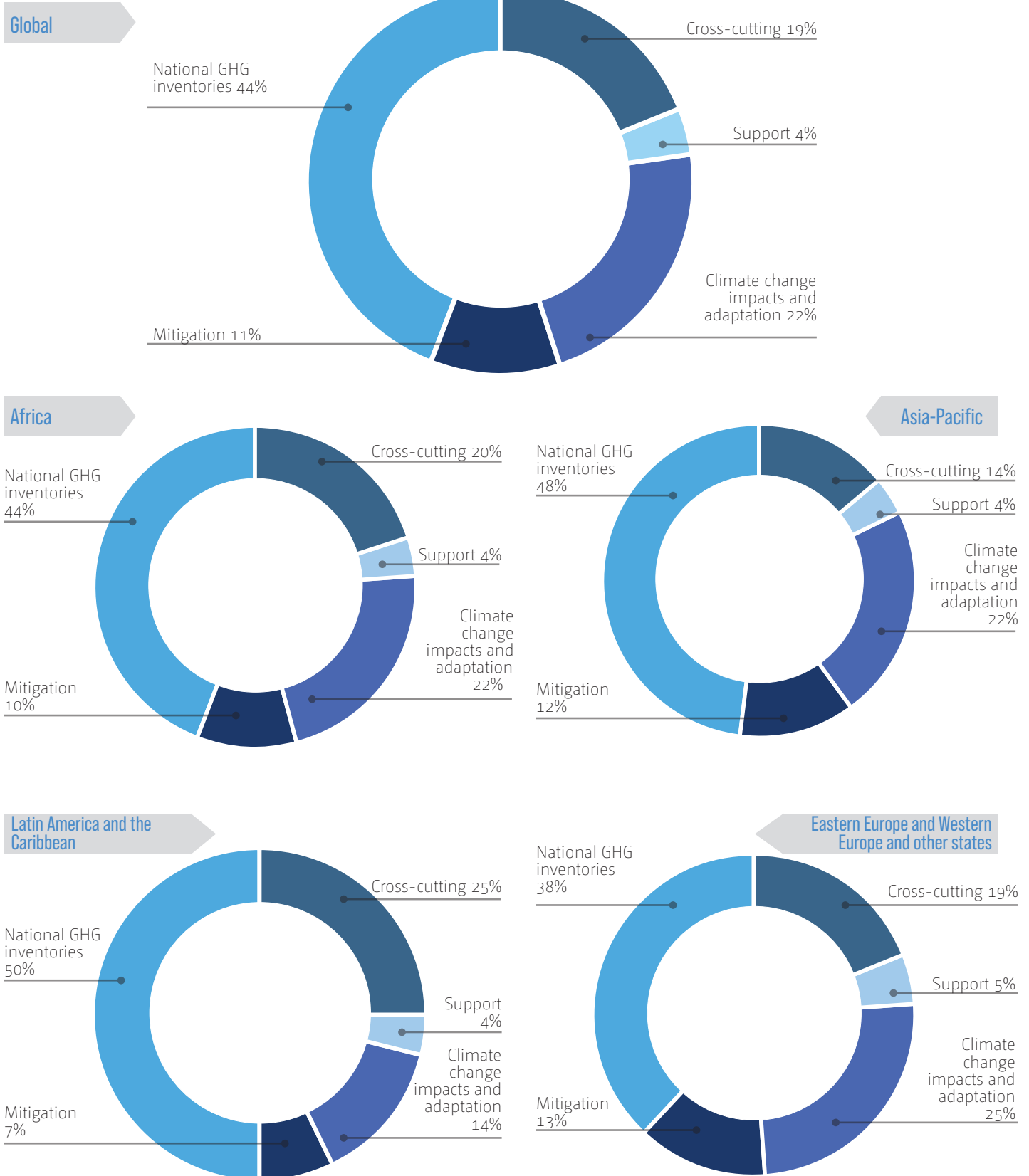
For more information on the analytical framework and key terminology used for the compilation and synthesis of the challenges and needs, consult the CGE Technical Paper 2022 (FCCC/SBI/2022/INF.12).



Thematic overview of the challenges and capacity-building needs

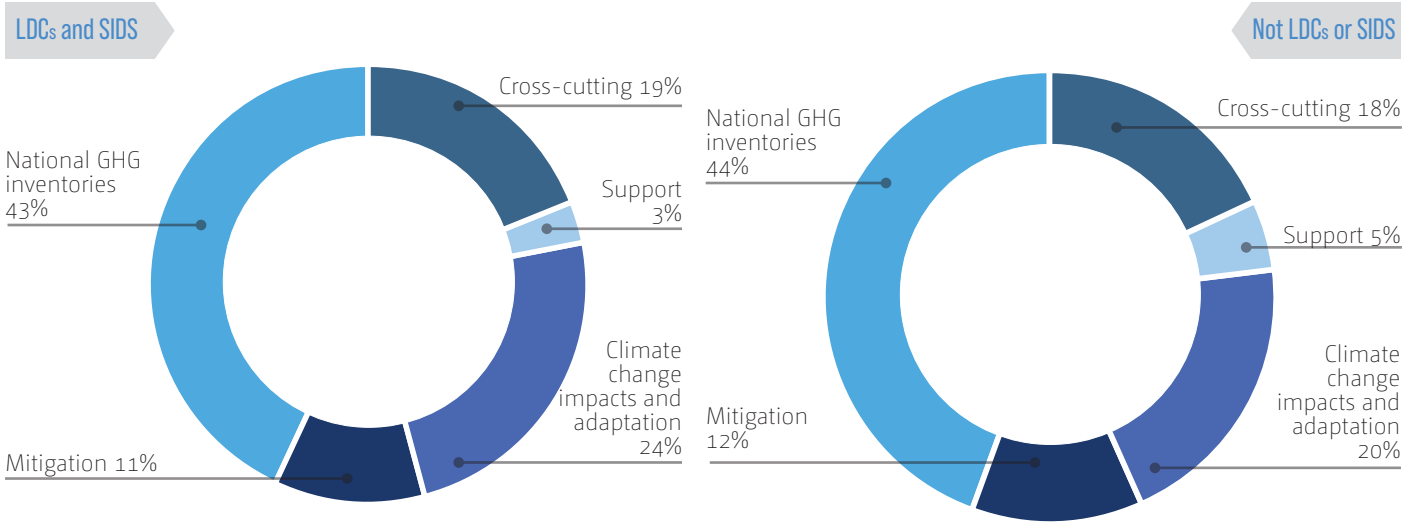
Global and regional picture

The themes under which the challenges and capacity-building needs were reported differed by region. The diagrams below show the thematic breakdown of the challenges and capacity-building needs reported by developing country Parties at the regional and global level.



Picture by group of developing countries

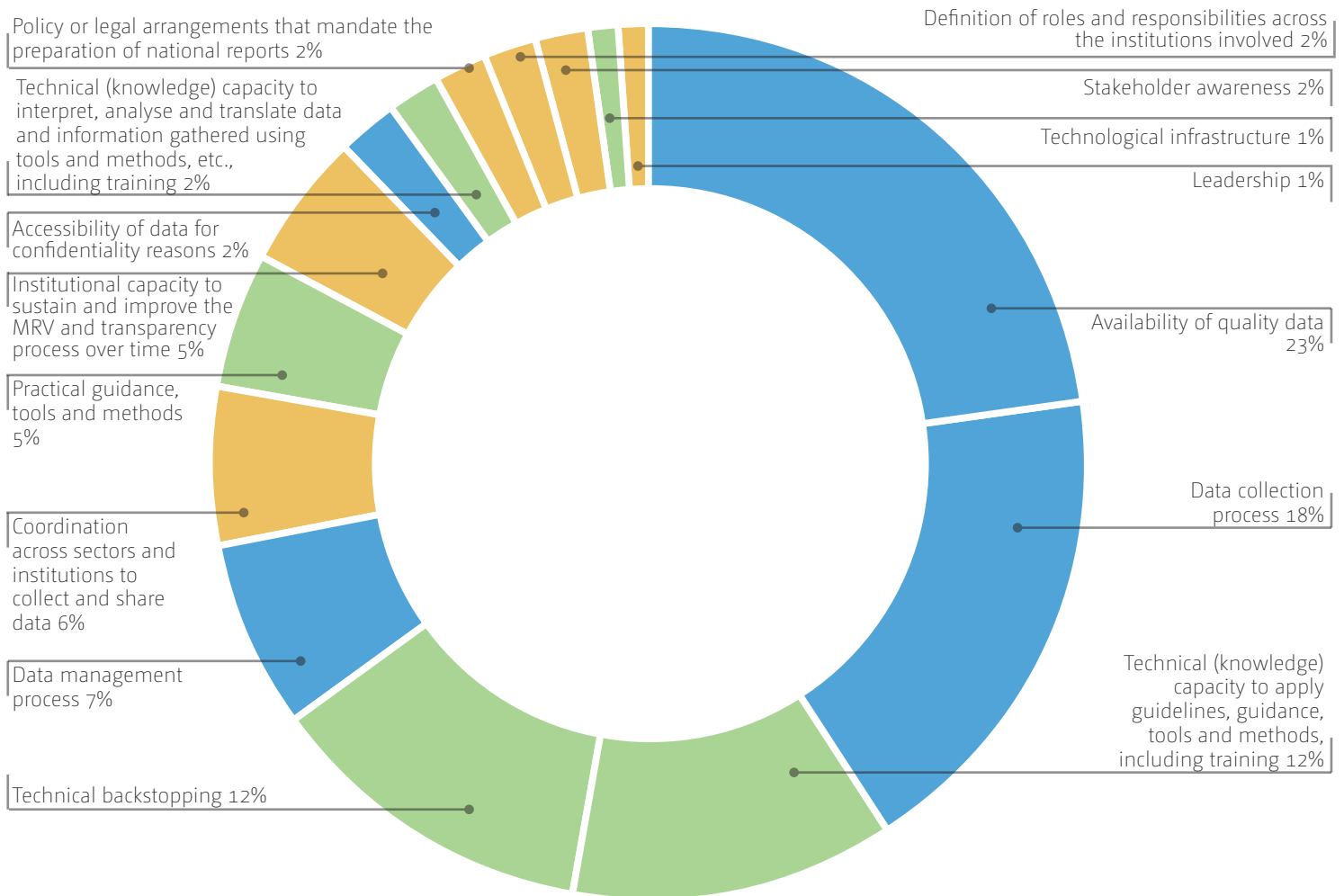
The percentage breakdown by theme of the reported challenges and capacity-building needs differed between the groups of developing country Parties, as illustrated in the diagrams below.





Global picture

With regard to preparing national GHG inventories, most of the challenges and needs reported were in the area of data and information, followed by the area of methodology and tools. In terms of data and information, 23 per cent of the challenges and needs reported related to availability of quality data and 18 per cent to the data collection process, while in the area of methodology and tools, 12 per cent of the challenges and needs pertained to issues related to technical capacity and 12 per cent to technical backstopping. The diagram below summarizes the issues identified in relation to preparing national greenhouse gas inventories by category. See the boxes for examples from the three categories with the highest share among the issues identified.



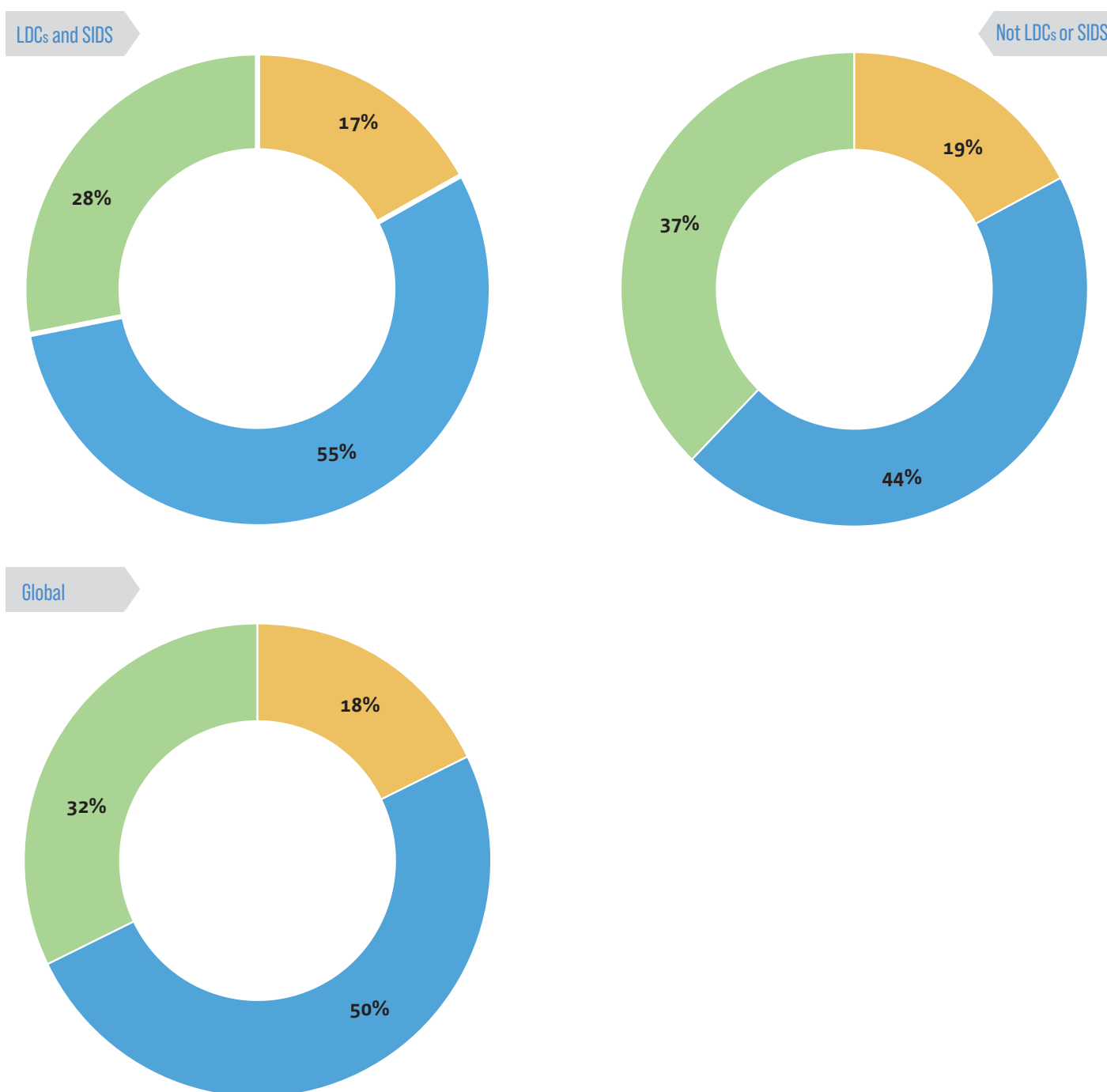
AVAILABILITY OF DATA QUALITY Many developing country Parties expressed that lack of quality data, including disaggregated activity data, historical data, high-quality data and complete time series, impeded the production of national GHG inventories, with several Parties reporting an inability to conduct uncertainty analyses for some categories owing to lack of activity data. In addition, several Parties reported that data and information are collected at the national aggregated level rather than from direct sources, which makes the use of higher-tier methodologies difficult. In some cases, Parties reported that data are collected from different sources and as such are received in a variety of formats that are often not compatible with the IPCC inventory software.


DATA COLLECTION PROCESS The data collection process was reported as challenging by many developing country Parties. Some stated the need to establish or improve the national system for collecting data and information pertaining to the GHG inventory, also emphasizing the need to strengthen the capacity of institutions to collect data on a continuous basis. Several Parties indicated that, since such data and information are collected in an ad hoc manner, mechanisms should be established for collecting disaggregated data. Other needs reported included conducting surveys to collect activity data and standardizing templates for and approaches to data collection.

TECHNICAL (KNOWLEDGE) CAPACITY TO APPLY GUIDELINES, GUIDANCE, TOOLS, METHODS, INCLUDING TRAINING Many developing country Parties expressed the need to enhance technical capacity through training national experts to understand and apply IPCC guidelines and tools, higher-tier methodologies, uncertainty analyses, different emission factors and QA/QC procedures, for example. A few Parties also indicated the need for training on remote sensing for land-use change monitoring.

Breakdown of areas in which challenges and needs related to preparing national greenhouse gas inventories were identified, by developing country Party group and globally

The percentage breakdown by area of reported challenges and needs related to preparing national GHG inventories differed by developing country Party group. The LDCs and SIDS reported a higher share of issues related to data and information but a lower share of challenges and needs in the area of methodology and tools than other developing country Parties that are not LDCs or SIDS. Diagrams below provide a breakdown of the areas in which challenges and needs related to preparing national greenhouse gas inventories identified by the different groups of developing country Parties.



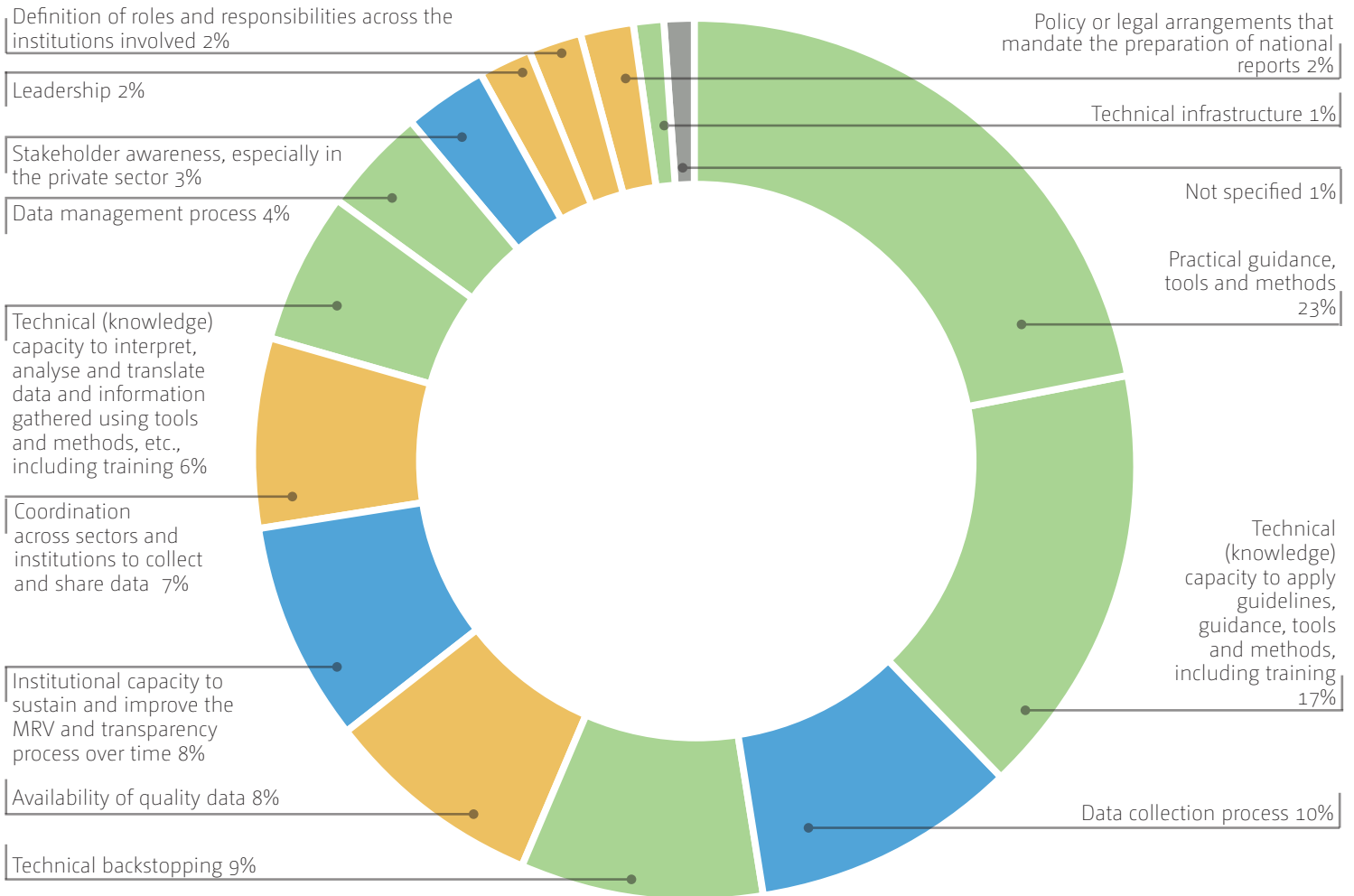
 The number indicates the percentage of total reported issues under the theme.

Issues associated with institutional arrangements
 Issues associated with data and information
 Issues associated with methodology and tools
 Area of issues not specified



Global picture

With regard to reporting on mitigation actions, more than half of the challenges and needs reported related to methodology and tools (55 per cent), followed by institutional arrangements (23 per cent) and data and information (22 per cent). In particular, the challenges due to lack of practical guidance, tools and methods accounted for 23 per cent, followed by issues pertaining to lack of technical capacity to apply guidelines, guidance, tools and methods (17 per cent). See the boxes for examples from the three categories with the highest share among the issues identified. The diagram below summarizes the issues identified in relation to reporting on mitigation actions by category. See the boxes for examples from the three categories with the highest share among the issues identified.



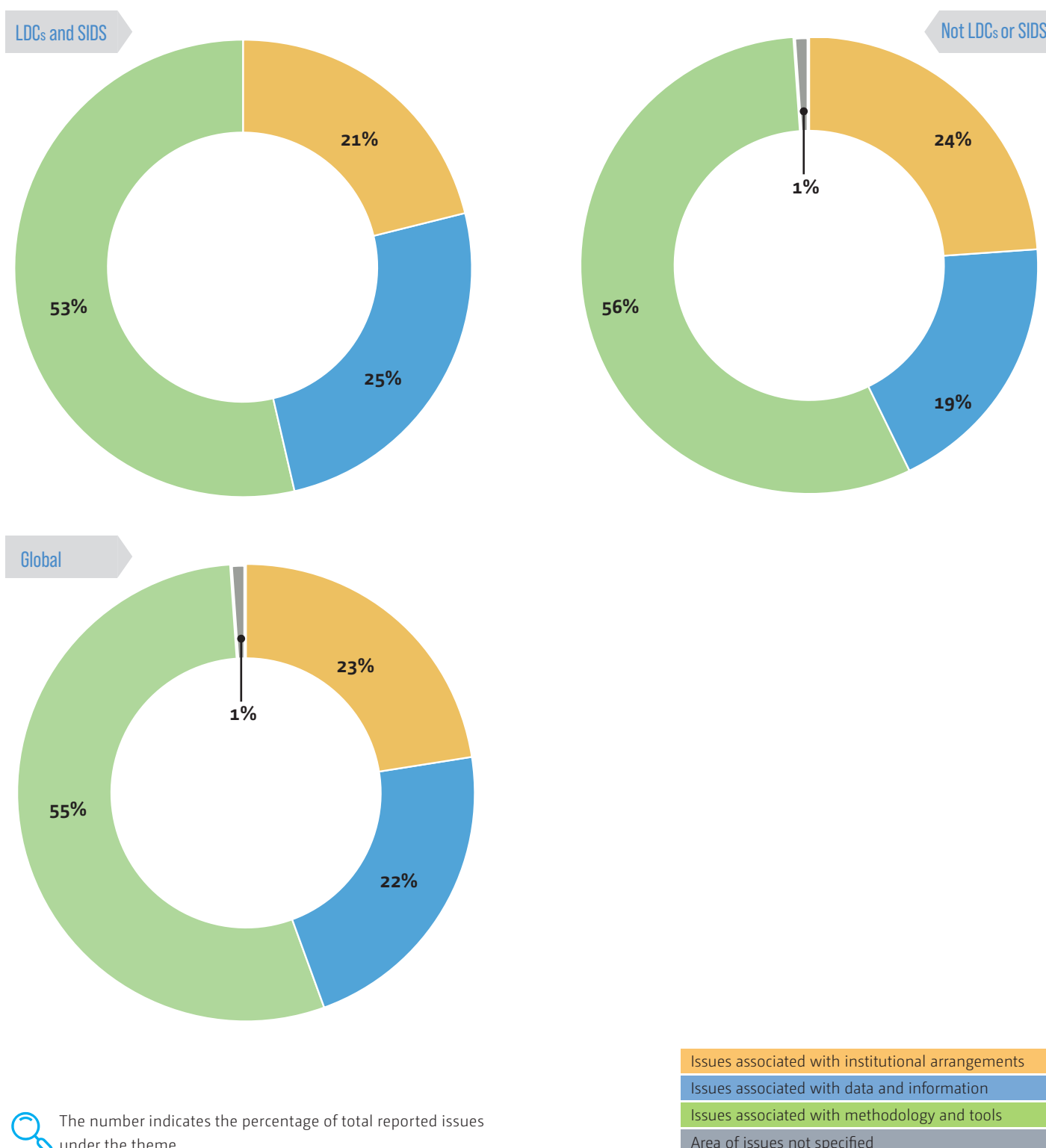
PRACTICAL GUIDANCE, TOOLS AND METHODS Some developing country Parties do not have sufficient guidance, tools or methods for assessing mitigation policies and impacts. For example, some Parties lack the country-specific models and associated assumptions needed to project emissions under different scenarios. Several Parties referred to the lack of guidance and tools for estimating the socioeconomic and environmental impacts of mitigation actions, while a few others expressed the need for tailored, country-specific training materials and methodologies for estimating the impacts of mitigation actions, for example in relation to energy efficiency.

TECHNICAL (KNOWLEDGE) CAPACITY TO APPLY GUIDELINES, GUIDANCE, TOOLS AND METHODS Some developing country Parties reported the need to enhance their national capacity to use tools and methodologies for formulating baselines, developing mitigation scenarios and analysing the effects and costs of mitigation actions. Some Parties highlighted the need for training and technical backstopping to build capacities to utilize simulation and modelling tools for developing baseline and mitigation scenarios and identifying mitigation actions and policies and measures appropriate to the national context.

DATA COLLECTION PROCESS Some developing country Parties do not have a centralized system for collecting mitigation-related data and therefore pointed out the need for mitigation databases in order to collect information on the implementation of mitigation actions by sector and track progress in implementing and achieving NDCs. Some Parties expressed the need to strengthen their existing monitoring systems and information platforms so as to track progress towards implementing mitigation measures, such as by expanding the domestic MRV system to include all mitigation actions and enhancing national capacity to collect and report related information in accordance with the relevant guidelines.

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

The percentage breakdown by area of reported challenges and needs related to reporting on mitigation actions differed slightly by developing country Party group, although there were similar patterns in the order by frequency of the reporting of challenges and needs in those areas. There is a consistent need to address issues around the use of methodologies and tools for mitigation assessment across the different groups of developing country Parties. Diagrams below provide 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.

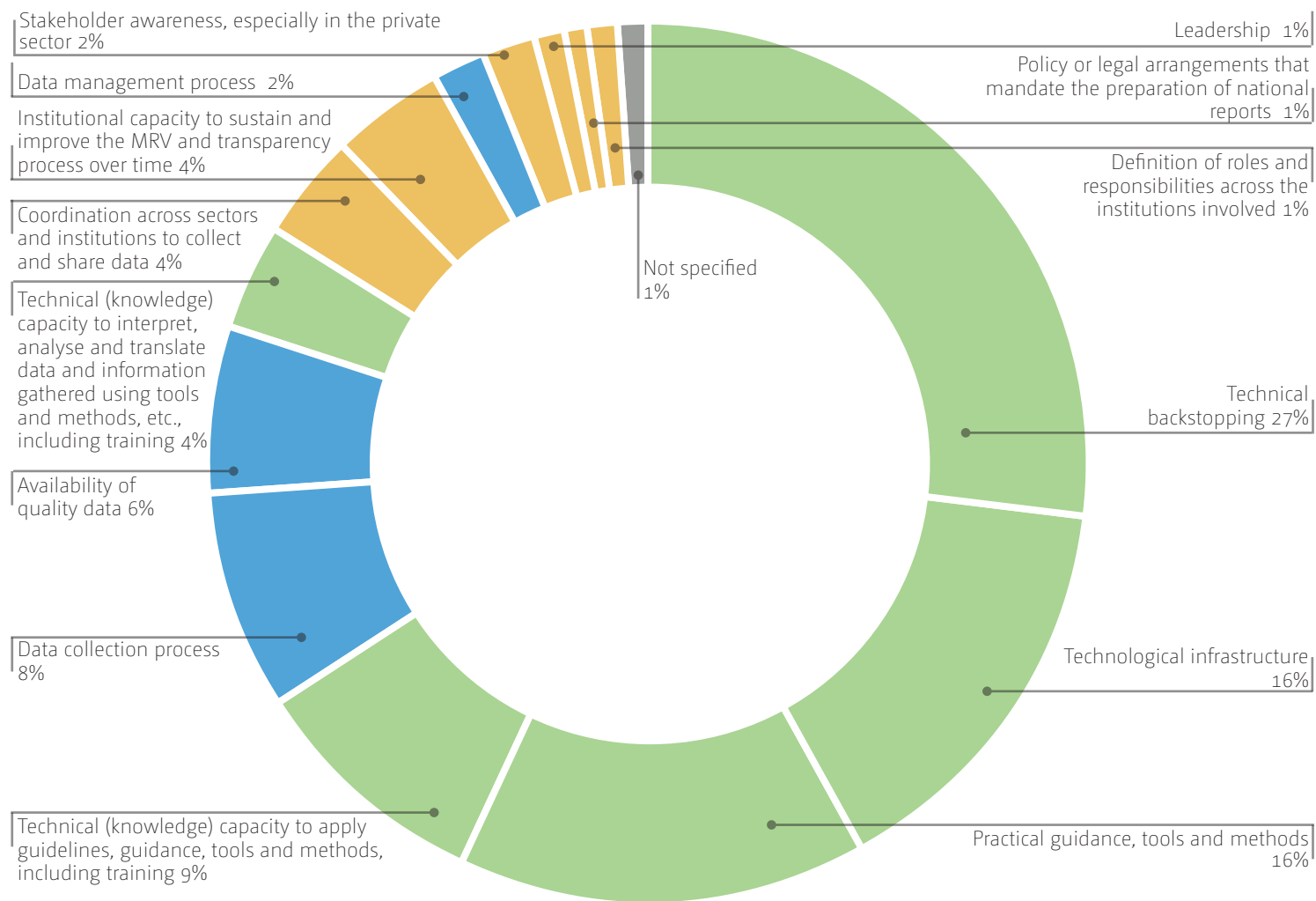




Reporting on climate change impacts and adaptation

Global picture

With regard to reporting on climate change impacts and adaptation, most challenges and needs reported related to methodology and tools (71 per cent), followed by data and information (16 per cent) and institutional arrangements (12 per cent). In particular, the need for technical backstopping, including scientific research and studies, accounted for 27 per cent, followed by challenges with technological infrastructure (16 per cent) and the need for more practical guidance, tools and methods (16 per cent). The diagram below summarizes the issues identified in relation to reporting on climate change impacts and adaptation by category. See the boxes for examples from the three categories with the highest share among the issues identified.



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 assessments. Several Parties stated the need to enhance knowledge of specific climate vulnerabilities, impacts and risks at the subnational and national level. A few Parties mentioned the need to increase the involvement of members of research and academic institutions in discussions on climate change issues.

TECHNICAL INFRASTRUCTURE Many developing country Parties reported the need to establish, maintain or improve technological infrastructure for collecting climate data and monitoring meteorological, atmospheric, oceanographic and terrestrial variables related to climate change. Such infrastructure includes weather forecasting centres, hydrological stations, meteorological stations and climatological observation networks. Several Parties mentioned a low density of climate observation networks and an inhomogeneous spatial distribution of stations at the national level, while others identified outdated meteorological service instruments in need of calibration or renewal.


PRACTICAL GUIDANCE, TOOLS AND METHODS Some developing country Parties reported a lack of methodologies for consistently monitoring adaptation measures and assessing issues of vulnerability and adaptation applicable to certain sectors. Parties identified the need for training on identifying appropriate tools for climate risk assessment and carrying out vulnerability and impact assessments on climate change. Several Parties expressed the need to develop climate risk maps or a hazard zone index as diagnostic tools and enhance support for managing adaptation to climate change.

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

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. Notably, there is a consistent need to address issues pertaining to the use of methodologies and tools for reporting on climate change impacts and adaptation across all groups of developing country Parties. Diagrams below provide 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.



- Issues associated with institutional arrangements
- Issues associated with data and information
- Issues associated with methodology and tools
- Area of issues not specified

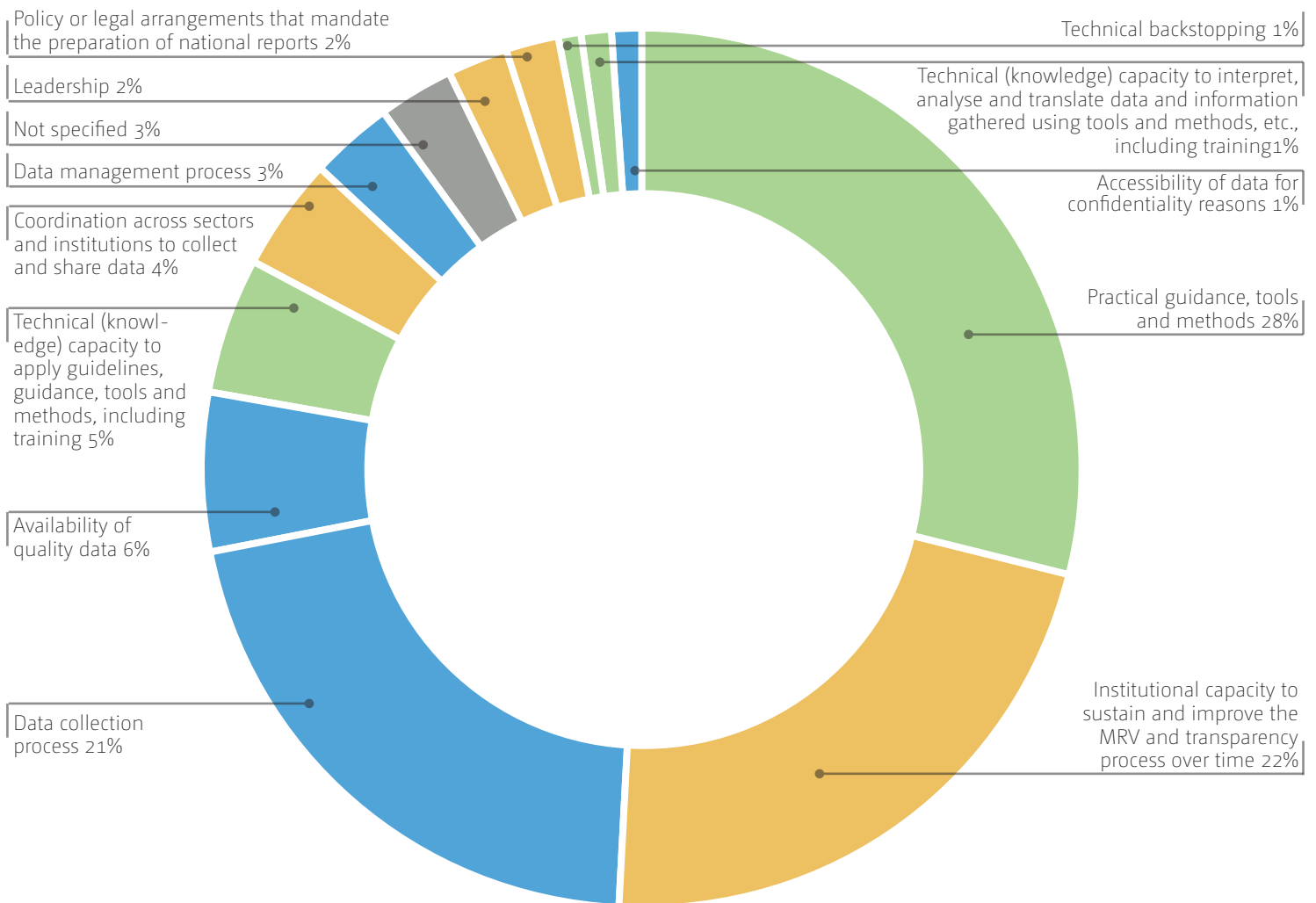
 The number indicates the percentage of total reported issues under the theme.



Reporting on support needed and received

Global picture

With regard to reporting on support needed and received, challenges and needs in the area of methodology and tools were reported most frequently (35 per cent), followed by those in the areas of institutional arrangements (31 per cent) and data and information (31 per cent). In particular, challenges due to lack of practical guidance, tools and methods (28 per cent) featured strongly, followed by lack of institutional capacity to sustain and improve the MRV and transparency process over time (22 per cent) and the data collection process (21 per cent). The diagram below summarizes the issues identified in relation to reporting on support needed and received by category. See the boxes for examples from the three categories with the highest share among the issues identified.



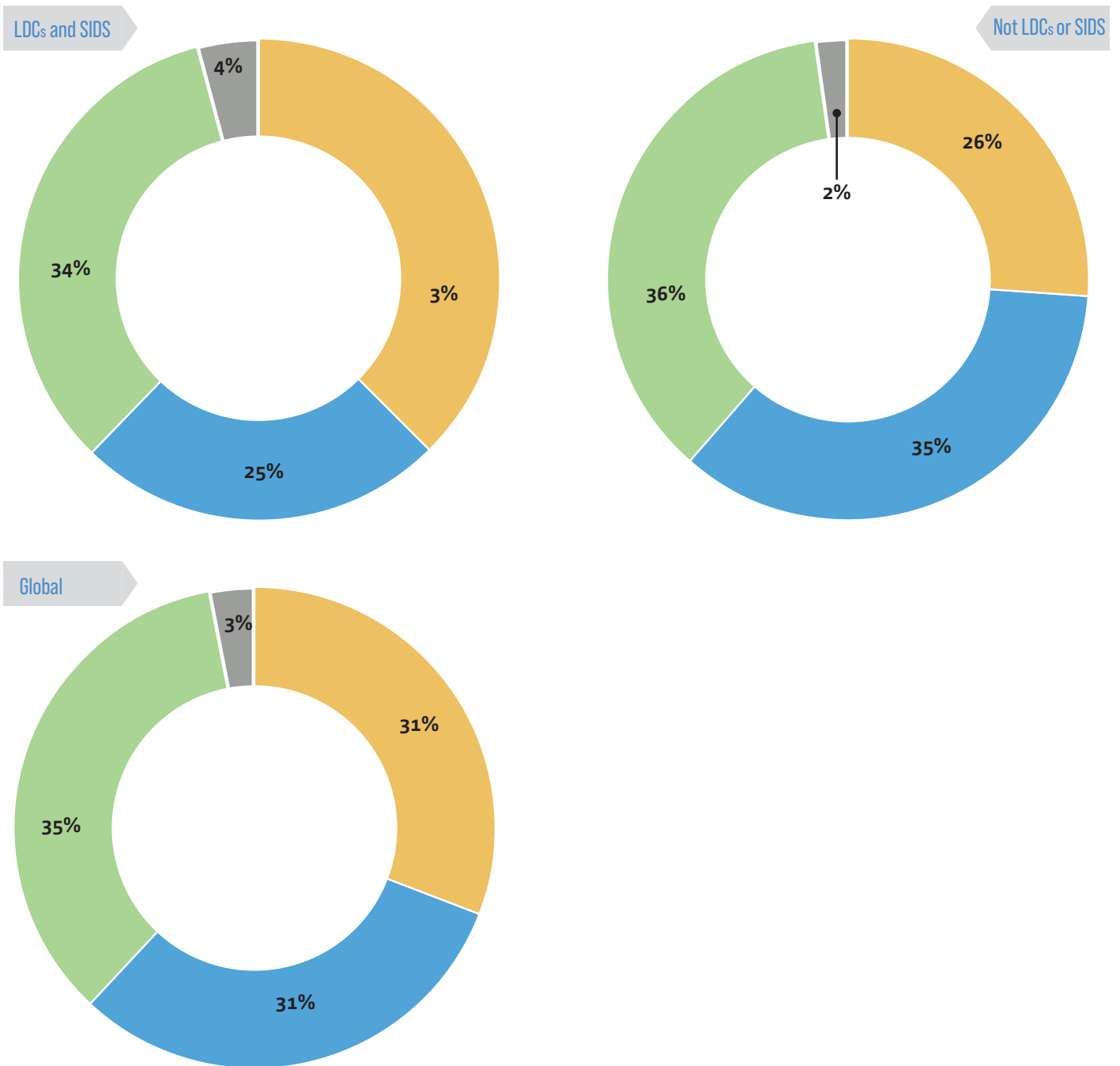
PRACTICAL GUIDANCE, TOOLS AND METHODS Several developing country Parties noted that there is no coherent or common definition of climate finance or approach to classifying, monitoring and reporting on climate finance. In determining the amounts to be reported as climate finance, reporting entities usually rely on their own operational definitions, and differences can affect estimates of overall finance flows. Parties therefore noted the need to adopt methodologies and tools for defining climate finance in the national and international context and ensuring that stakeholders collect data on support needed and received appropriately, which would also aid efforts to mobilize climate finance both domestically and internationally. Some Parties expressed the need to enhance national capacities to identify technology development and transfer needs in order to address climate change issues and facilitate reporting on support needed and received in this regard. Parties also noted a lack of knowledge on how to mobilize support needed, both from domestic and from international sources.


INSTITUTIONAL CAPACITY TO SUSTAIN/IMPROVE THE MRV AND TRANSPARENCY PROCESS OVER TIME Several developing country Parties expressed the need to enhance institutional capacity to sustain and improve the MRV and transparency process over time. More specifically, some Parties highlighted the need to establish a pool of experts from different government ministries and the climate finance landscape, noting the need to provide to the experts training on tracking support needed and received and climate finance, including at the project level.

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 reported gaps in relation to detecting financial, technological and capacity-building needs and the importance of closing them in order to enhance reporting on support needed and received.

Breakdown of areas in which challenges and needs related to reporting on support needed and received were identified, by developing country Party group and globally

The percentage breakdown by area of reported challenges and needs related to reporting on support needed and received differed by developing country Party group. Other developing country Parties that are not LDCs or SIDS reported a higher share of issues related to data and information but a lower share of issues pertaining to institutional arrangements than the LDCs and SIDS. Diagrams below provide a breakdown of the areas in which challenges and needs related to support needed and received were identified by the different groups of developing country Parties.



 The number indicates the percentage of total reported issues under the theme.

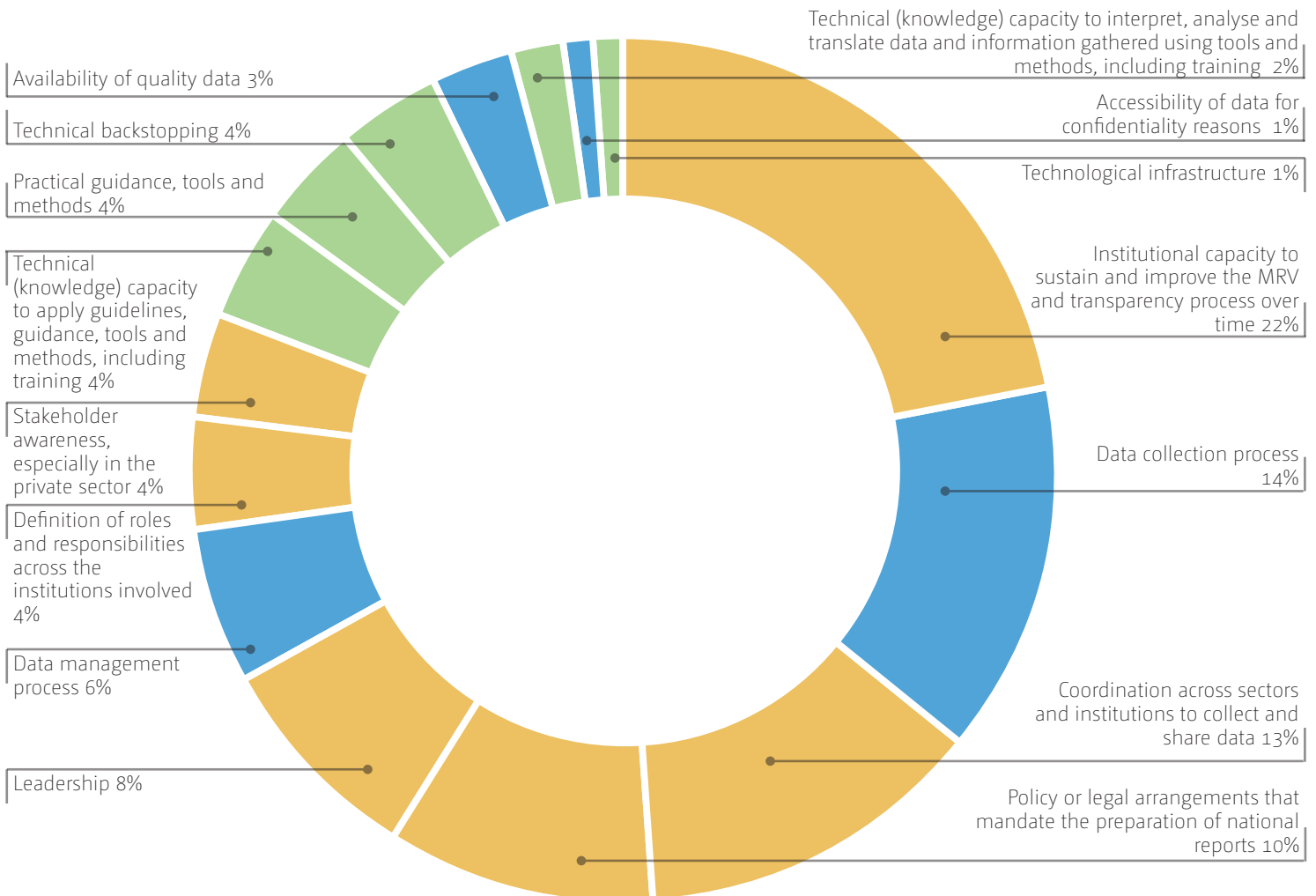
- Issues associated with institutional arrangements
- Issues associated with data and information
- Issues associated with methodology and tools
- Area of issues not specified



Cross-cutting issues

Global picture

With respect to cross-cutting issues, 61 per cent of the challenges and needs reported related to institutional arrangements, followed by data and information (23 per cent) and methodology and tools (16 per cent). In particular, challenges and needs pertaining to the need to enhance institutional capacity to sustain and improve the MRV and transparency process over time were most frequently reported (22 per cent), followed by lack of an adequate data collection process (14 per cent) and the need to enhance coordination across sectors and institutions to collect and share data (13 per cent). The diagram below summarizes the cross-cutting issues identified by category. See the boxes for examples from the categories of identified cross-cutting issues.



INSTITUTIONAL ARRANGEMENTS Many developing country Parties reported the need to further enhance existing institutional arrangements to meet future reporting needs, highlighting several key areas in this regard, including the need to secure adequate and predictable financial support; the need for training and mentoring, including technical backstopping, to develop the technical and managerial expertise required to stabilize related operations and enhance reporting over time; the need to ensure that policy and legal arrangements for stakeholder participation underpin collaboration and coordination with key stakeholders; and the need to develop capacity in areas required for reporting under the ETF, the need to develop indicators for tracking progress in implementing and achieving NDCs and integrate climate change issues into national policies, plans and programmes.

METHODOLOGY AND TOOLS Parties reported an array of needs, predominantly in the areas of training national experts on preparing national inventory reports and conducting modelling and analysis of the different scenarios and aspects (e.g. of technical, economic and environmental scenarios) for deploying low-carbon technologies; and developing cross-sectoral climate change awareness programmes aimed at increasing understanding of the scientific basis of climate change, including sectoral impacts of climate change actions and available or emerging options for climate change mitigation and adaptation measures.

DATA AND INFORMATION Several developing country Parties expressed the need to further enhance the data collection process. Some of the key needs reported are to develop and maintain sectoral and centralized electronic databases into which data can be entered in the correct formats; collect more disaggregated data, for example gender-disaggregated data; actively involve government entities, research institutions, the public sector and non-governmental organizations in the data collection process; enhance data archiving and analysis processes to increase homogeneity and standardization; and implement QA/QC measures.

Breakdown of areas in which challenges and needs related to cross-cutting issues were identified, by developing country Party group and globally

The percentage breakdown by area of challenges and needs reported under this theme differed by developing country Party group, 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 a higher share of issues related to institutional arrangements than the LDCs and SIDS, while the LDCs and SIDS reported a higher share of issues with respect to data and information compared with other developing country Parties that are not LDCs or SIDS. Diagrams below provide a breakdown of the areas in which challenges and needs related to cross-cutting issues were identified by the different groups of developing country Parties.

