



CGE Technical Paper 2021

Distilled

Updated technical paper on problems, constraints, lessons learned and capacity-building needs in preparing national communications and biennial update reports 2021



SEPTEMBER 2021
CONSULTATIVE GROUP OF EXPERTS

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.

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 in a timely and sustainable manner.

CONSULTATIVE GROUP OF EXPERTS TECHNICAL PAPER 2021 DISTILLED

The Consultative Group of Experts, with a view to providing technical assistance and support that responds to the needs of developing country Parties in a targeted and strategic manner, 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, measurement, reporting and verification experts and practitioners. The Consultative Group of Experts Technical Paper 2021 Distilled provides a visual presentation of the information contained in the Consultative Group of Experts updated technical paper published in 2021.

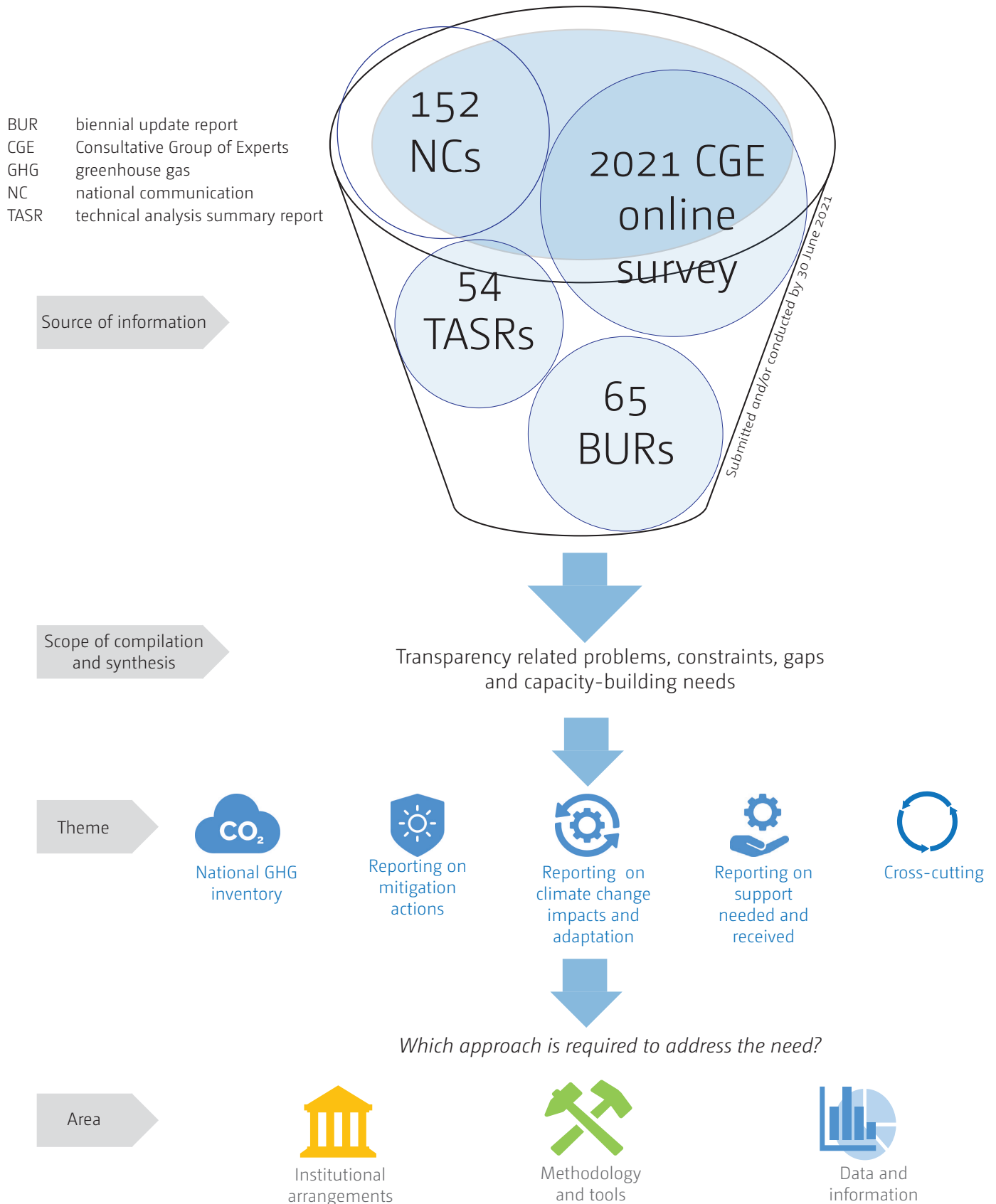
The information on the existing and emerging problems and constraints, lessons learned and capacity-building needs draws on, among others, an online survey on measurement, reporting and verification and the enhanced transparency framework conducted by the Consultative Group of Experts in 2021, national communications and biennial update reports submitted by developing country Parties and summary reports on the technical analysis of biennial update reports.

For more information, see the CGE Technical Paper 2021 (FCCC/TP/2021/2), available at <https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-cge/cge-training-materials/enhanced-transparency-framework-technical-material#eq-4>.

Disclaimer: Percentages may not add up to 100% exactly in some instances, as they are rounded to the nearest percent.

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

According to the level of engagement in the existing measurement, reporting and verification arrangements:



- Group of developing countries that had submitted at least one biennial update report and participated at least once in the international consultation and analysis process
- Group of developing countries that had submitted national communications only



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 2021 (FCCC/TP/2021/2).

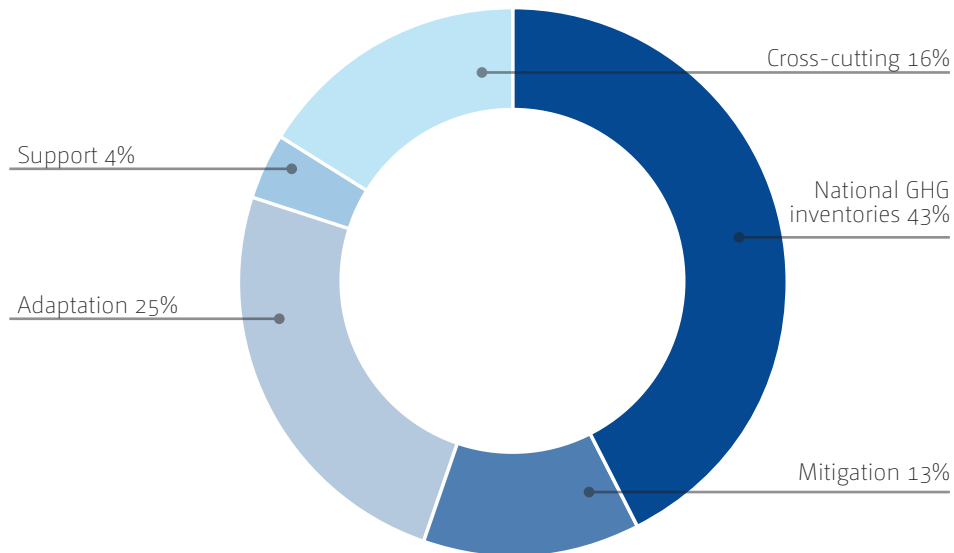


THEMATIC OVERVIEW OF THE CHALLENGES AND CAPACITY-BUILDING NEEDS

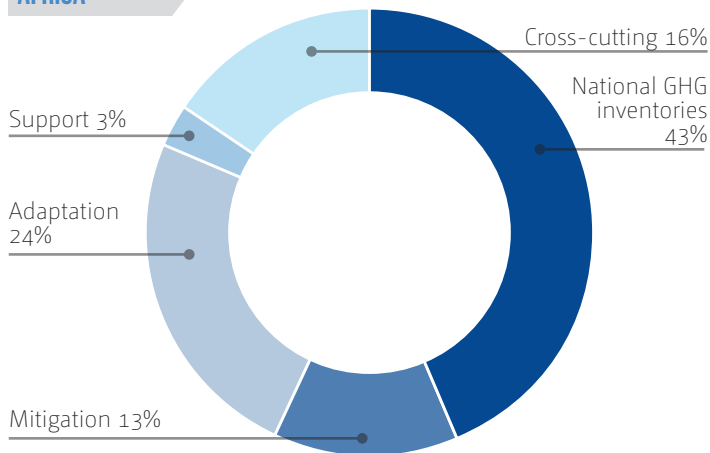
GLOBAL AND REGIONAL PICTURE

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.

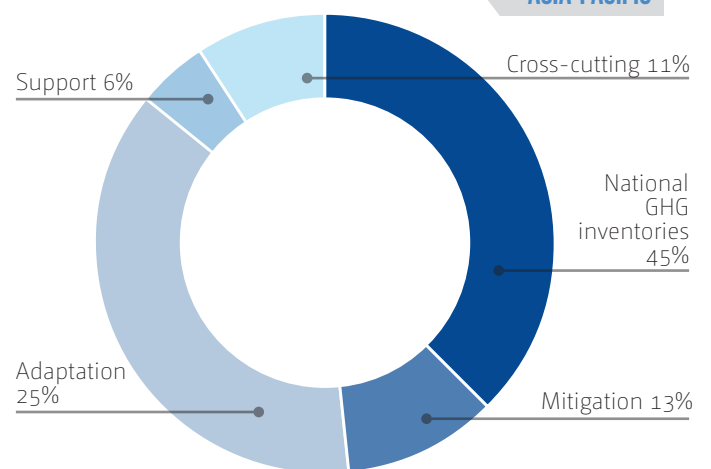
GLOBAL



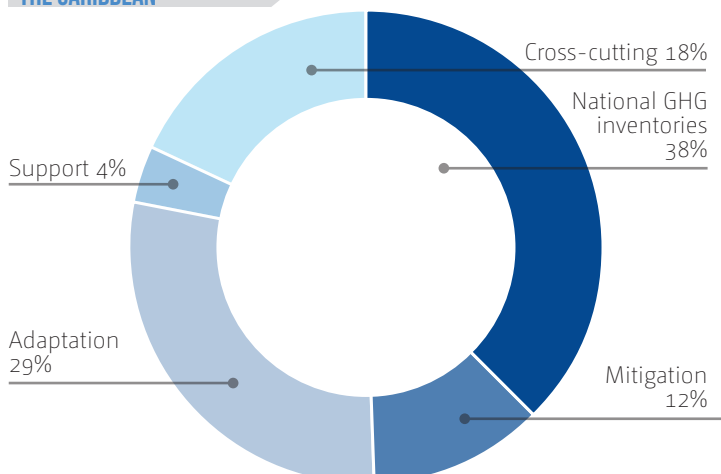
AFRICA



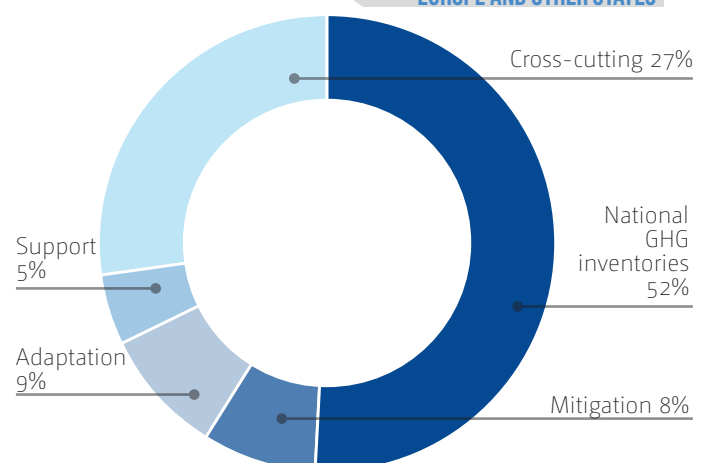
ASIA-PACIFIC



LATIN AMERICA AND THE CARIBBEAN

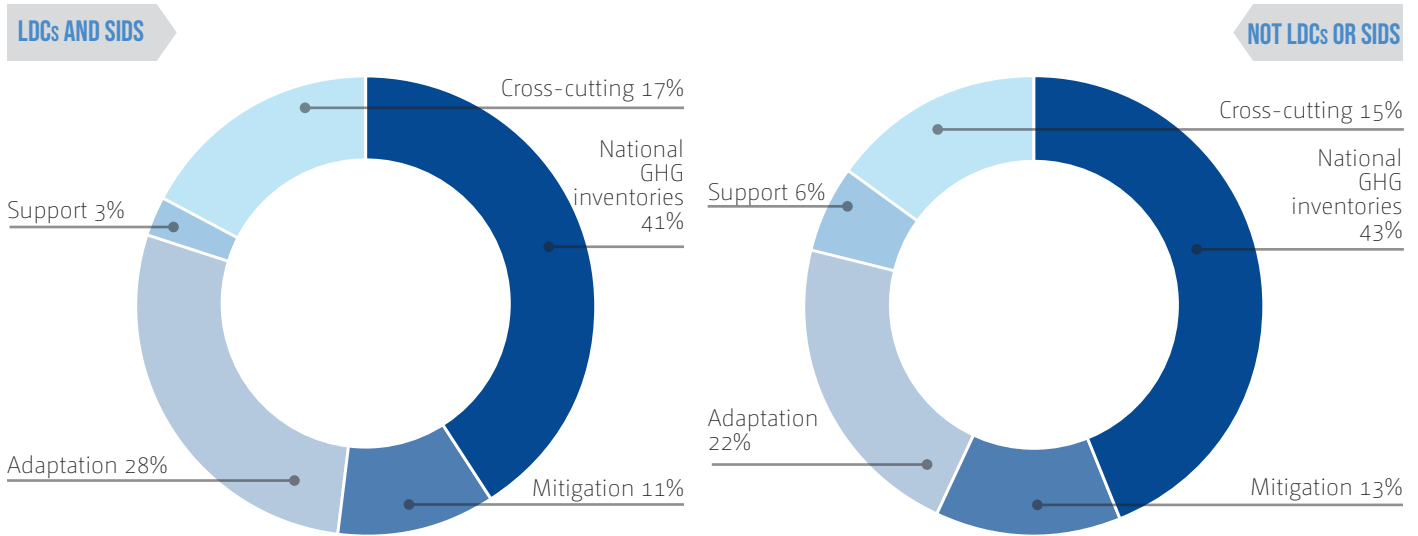


EASTERN EUROPE AND WESTERN EUROPE AND OTHER STATES

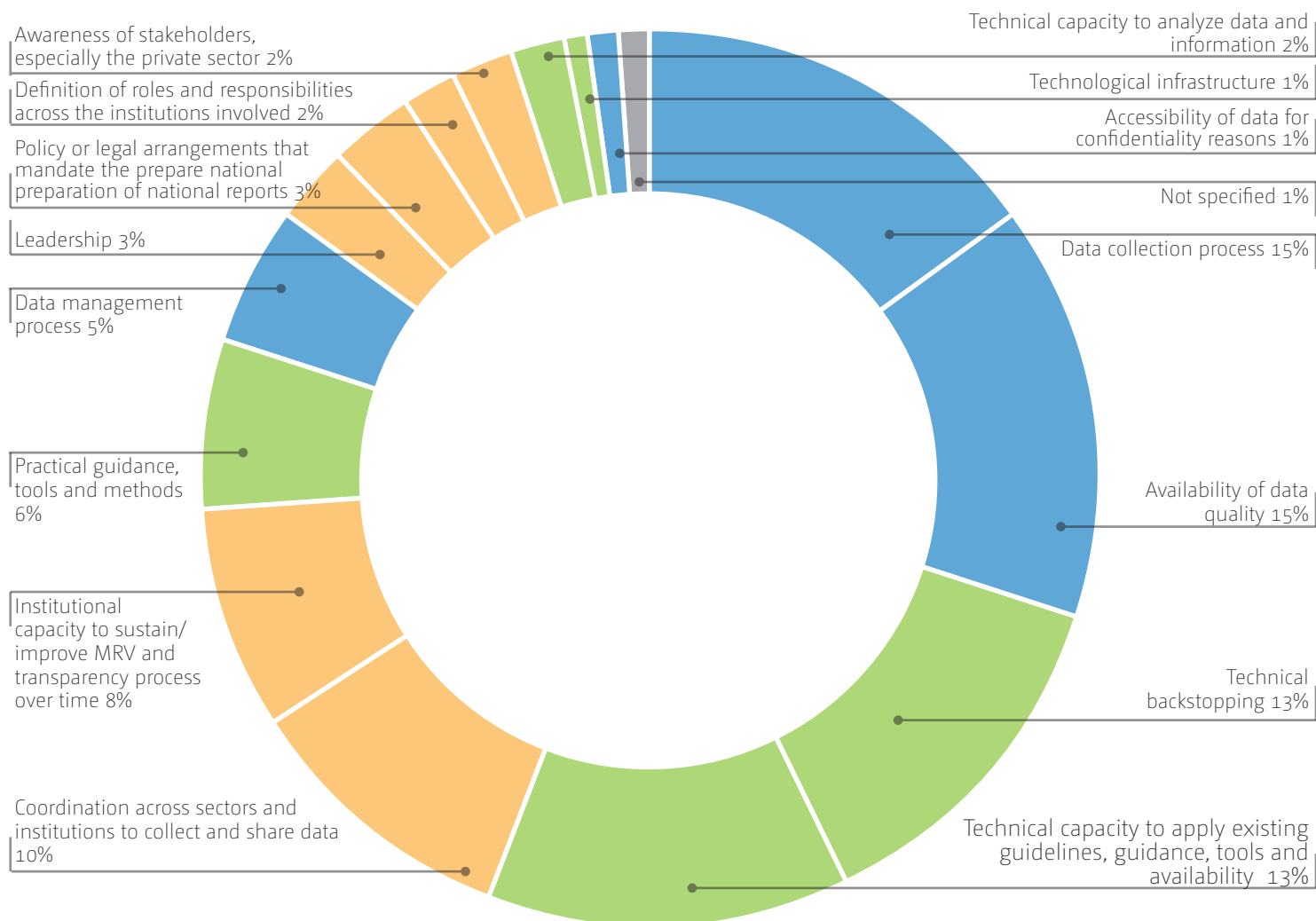


PICTURE BY GROUP OF DEVELOPING COUNTRIES

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.



With regard to preparing national greenhouse gas inventories, 36 per cent of the challenges and needs reported by developing country Parties related to data and information, followed by methodology and tools (35 per cent) and institutional arrangements (28 per cent). 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.



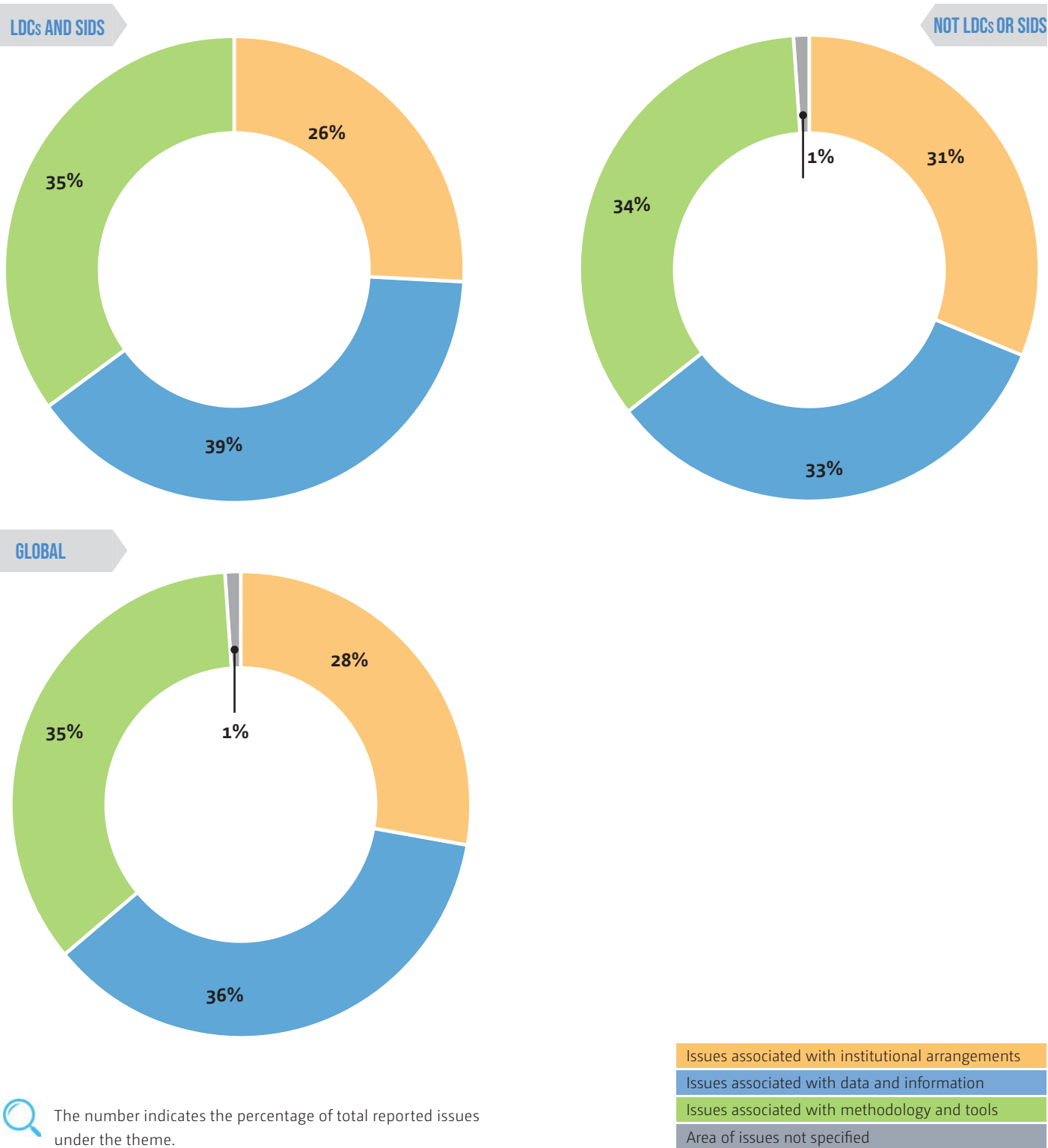
TECHNICAL BACKSTOPPING Many developing country Parties identified the need to obtain access to expertise or to enhance the existing expertise in the country to, for example, conduct an uncertainty analysis; develop accurate estimation methodologies for all unreported source categories; develop greenhouse gas 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 greenhouse gas emissions; and increase and promote scientific research on the development of country-specific emission factors.

AVAILABILITY OF DATA QUALITY Many developing country Parties stated that lack of reliable data impedes the accurate estimation of emissions. The data issues reported relate to the unavailability of activity data, inconsistency of data for reported years and inconsistencies between data sources. In some cases, the lack of quality data is due to an inadequate data collection process. For example, some developing country Parties explained how inadequate data has restricted the inventory compilers to using the Intergovernmental Panel on Climate Change (IPCC) tier 1 approach only.

DATA COLLECTION PROCESS For many developing country Parties, a significant challenge is dealing with data that are outdated, incomplete or incompatible and setting up a database that would make this task easier. Several developing country Parties 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 developing country Parties identified the need to improve their methodologies and procedures for gathering activity data and to develop country-specific emission factors.

PICTURE BY GROUP OF DEVELOPING COUNTRY PARTIES RELATED TO REPORTING ON NATIONAL GREENHOUSE GAS INVENTORIES

The percentage breakdown by area of the reported challenges and capacity-building needs related to preparing national greenhouse gas inventories differed between the groups 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 group consisting of the LDCs and SIDS reported a slightly higher share of issues related to data and information. See the diagrams below for a breakdown of the areas identified by the different groups of developing country Parties.

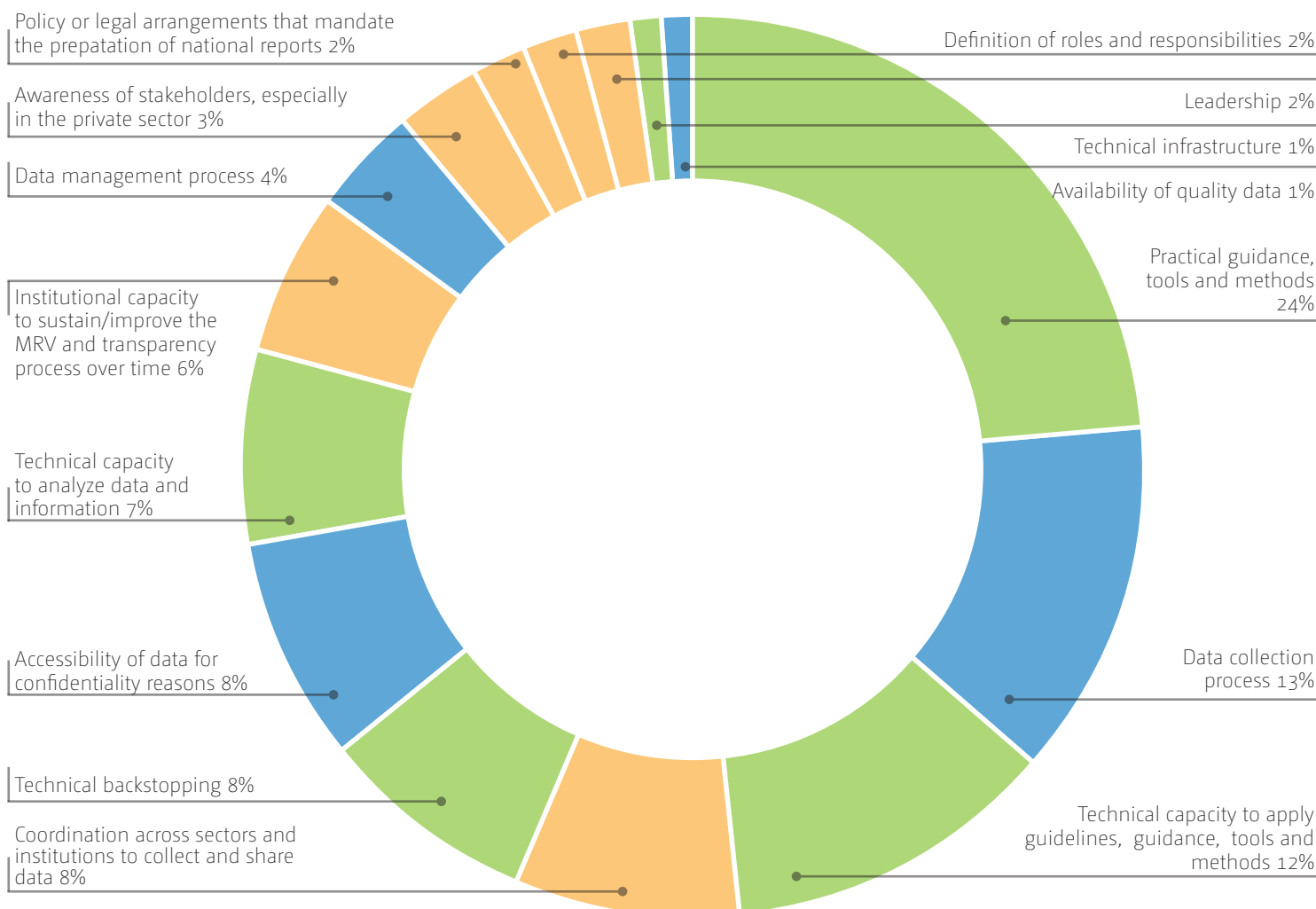




REPORTING ON MITIGATION ACTIONS

GLOBAL PICTURE

With regard to reporting on mitigation actions, half of the challenges and capacity-building needs reported by developing country Parties related to methodology and tools (52 per cent), followed by data and information (25 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). 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.



TECHNICAL CAPACITY TO APPLY GUIDELINES, GUIDANCE, TOOLS AND METHODS Many developing country Parties reported limited technical capacity or skills in 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 developing country Parties highlighted the need to enhance national capacity to report on mitigation actions, for example by establishing training programs 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 enhanced transparency framework; and use modelling tools for sectors such as agriculture, forestry and waste. Some developing country Parties also identified the need to enhance technical capacity to develop progress indicators and establish a mechanism to facilitate the systematic collection of information among stakeholders in order to enable the progress of mitigation actions to be tracked in all sectors.

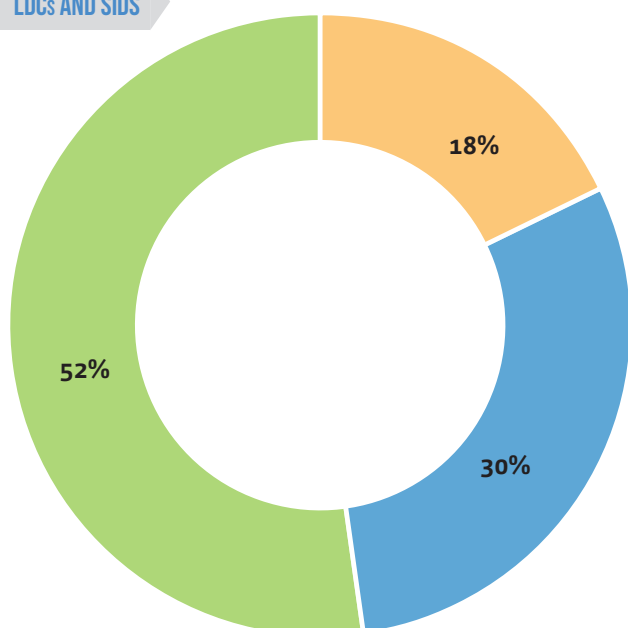
PRACTICAL GUIDANCE, TOOLS AND METHODS Many developing country Parties encountered difficulties in enhancing the information reported in their second or subsequent national communications or biennial update reports with respect to mitigation actions. Some of these Parties expressed the need for practical 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 practical guidelines for tracking the progress of implementation and achievement of nationally determined contributions (NDCs).

DATA PROCESSING 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 developing country 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, some developing country Parties highlighted the need to design a data collection process or system that meets data requirements for different models and software.

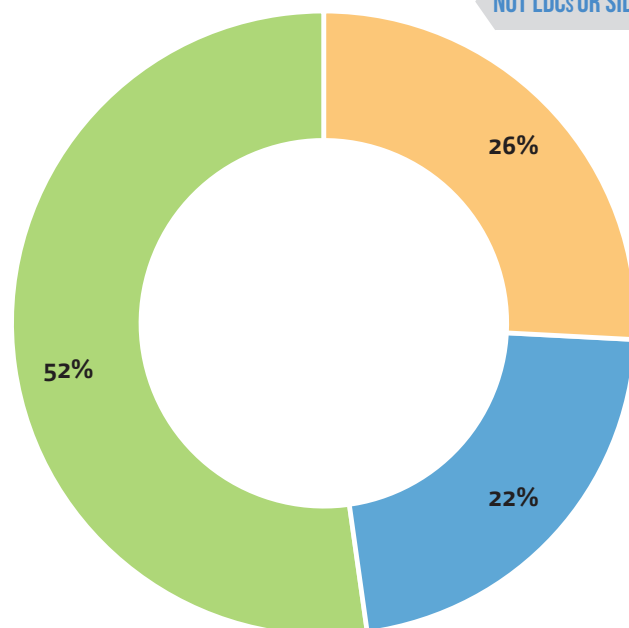
PICTURE BY GROUP OF DEVELOPING COUNTRY PARTIES RELATED TO MITIGATION ACTIONS

The percentage breakdown by area of the reported challenges and capacity-building needs related to reporting on mitigation actions differed between the groups 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 group consisting of the LDCs and SIDS reported the highest share of issues related to data and information compared with other developing country Parties that are not LDCs or SIDS. There is a consistent need among all developing country Parties to address issues associated with the use of methodology and tools for mitigation assessment. See the diagrams below for a breakdown of the areas identified by the different groups of developing country Parties.

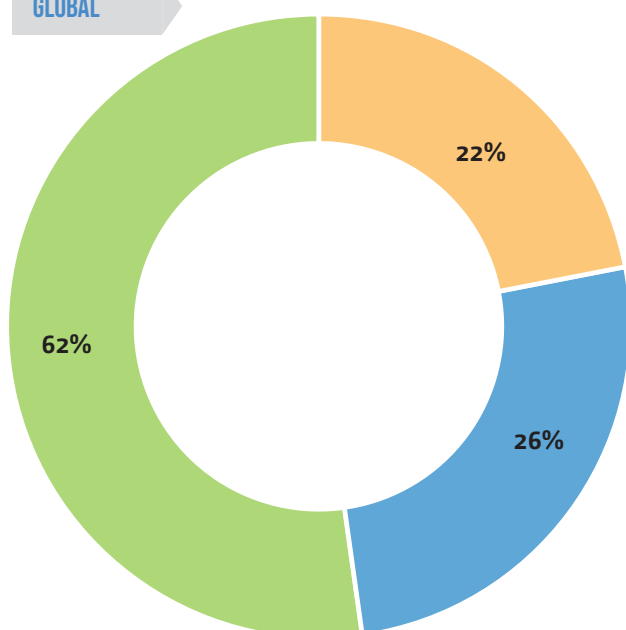
LDCs AND SIDS



NOT LDCs OR SIDS



GLOBAL



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.

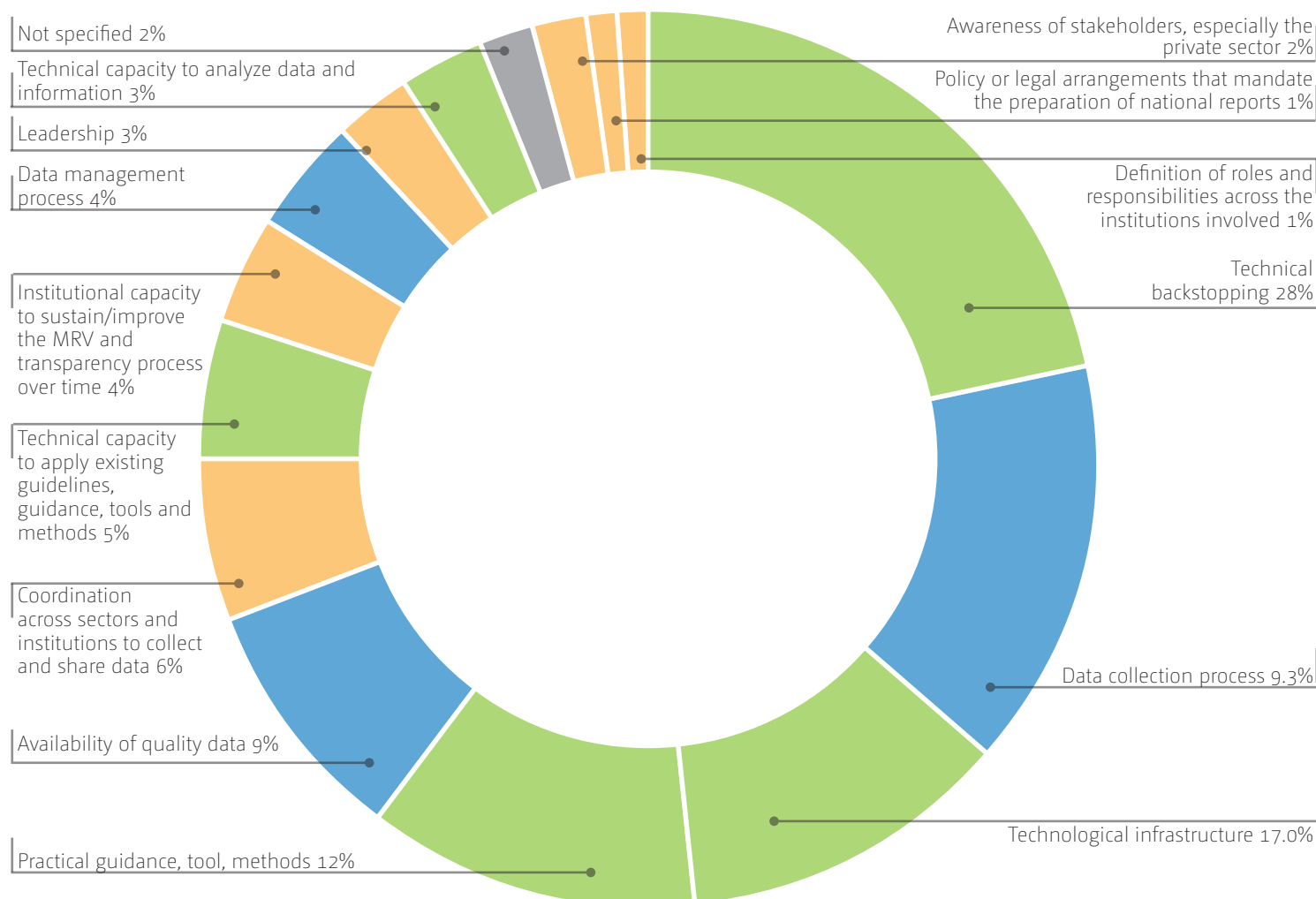


REPORTING ON CLIMATE CHANGE IMPACTS AND ADAPTATION

GLOBAL PICTURE

Page 11

With regard to reporting on climate change impacts and adaptation, more than half of the challenges and needs reported by developing country Parties 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 related to technological infrastructure (12 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.



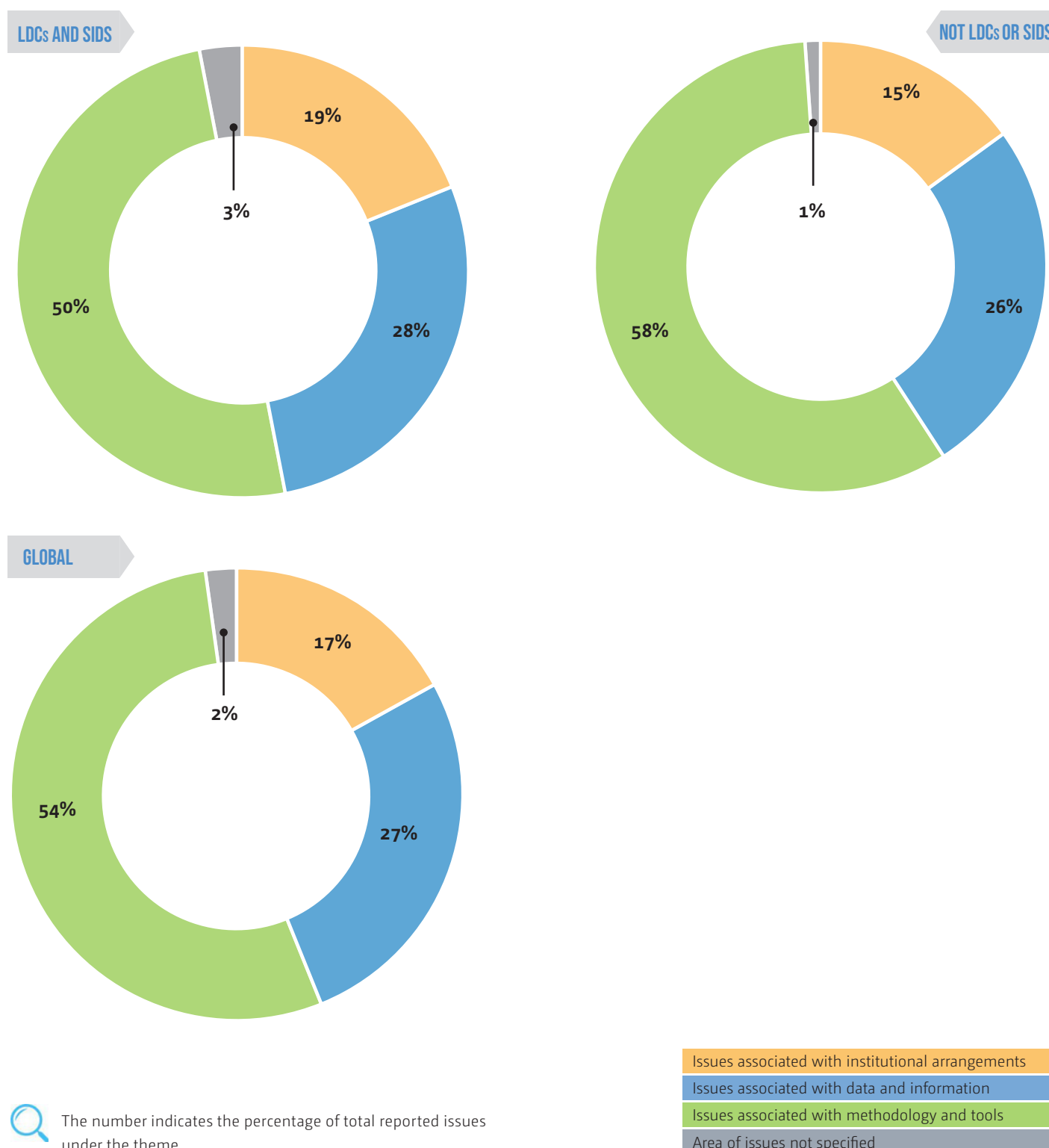
TECHNICAL BACKSTOPPING Many developing country Parties highlighted the need to promote research with a view to better understanding the impacts of climate change in various sectors (e.g. biodiversity, health, water resources and agriculture) and improving impact and vulnerability assessment. The demand for studies to develop common indicators for assessing the impacts of climate change at the national and regional level, promote integrated assessment across sectors and develop sectoral cost-benefit analysis methods was also highlighted. Several developing country Parties pointed out the limited funding allocated to climate change research domestically and lack of international financial support. At the same time, many developing country 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 developing country Parties expressed the need to enhance the institutional framework and technical expertise for the development of a comprehensive and integrated vulnerability (impacts and adaptation) assessment process. This could help to address challenges such as the lack of updated monitoring information; poor management of land allocation; loss of critical terrestrial ecosystems that has a significant bearing on vulnerability and adaptation to climate change; application of geographic information systems for water resources management; monitoring and management of low-lying areas; lack of disaster risk reduction action plans 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 used for vulnerability and adaptation assessment. This highlights 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 the downscaling of climate scenarios was also identified. Some developing country Parties highlighted the need to strengthen the capacities of national meteorological services in terms of observation networks, data processing and storage systems, communications and information exchange systems, and human resources.

TECHNICAL 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 centers, hydrological stations, meteorological stations and climatological observation networks. Several developing country Parties reported that existing observation networks or stations are outdated or have been damaged by extreme weather events and highlighted the need to improve this equipment and software to enhance observation and monitoring.

PICTURE BY GROUP OF DEVELOPING COUNTRY PARTIES RELATED TO CLIMATE CHANGE IMPACTS AND ADAPTATION

The percentage breakdown by area of the reported 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, the group of developing country Parties that are not LDCs or SIDS reported a higher share of issues associated with methodology and tools compared with the group consisting of the LDCs and SIDS. See the diagrams below for a breakdown of the areas identified by the different groups of developing country Parties.

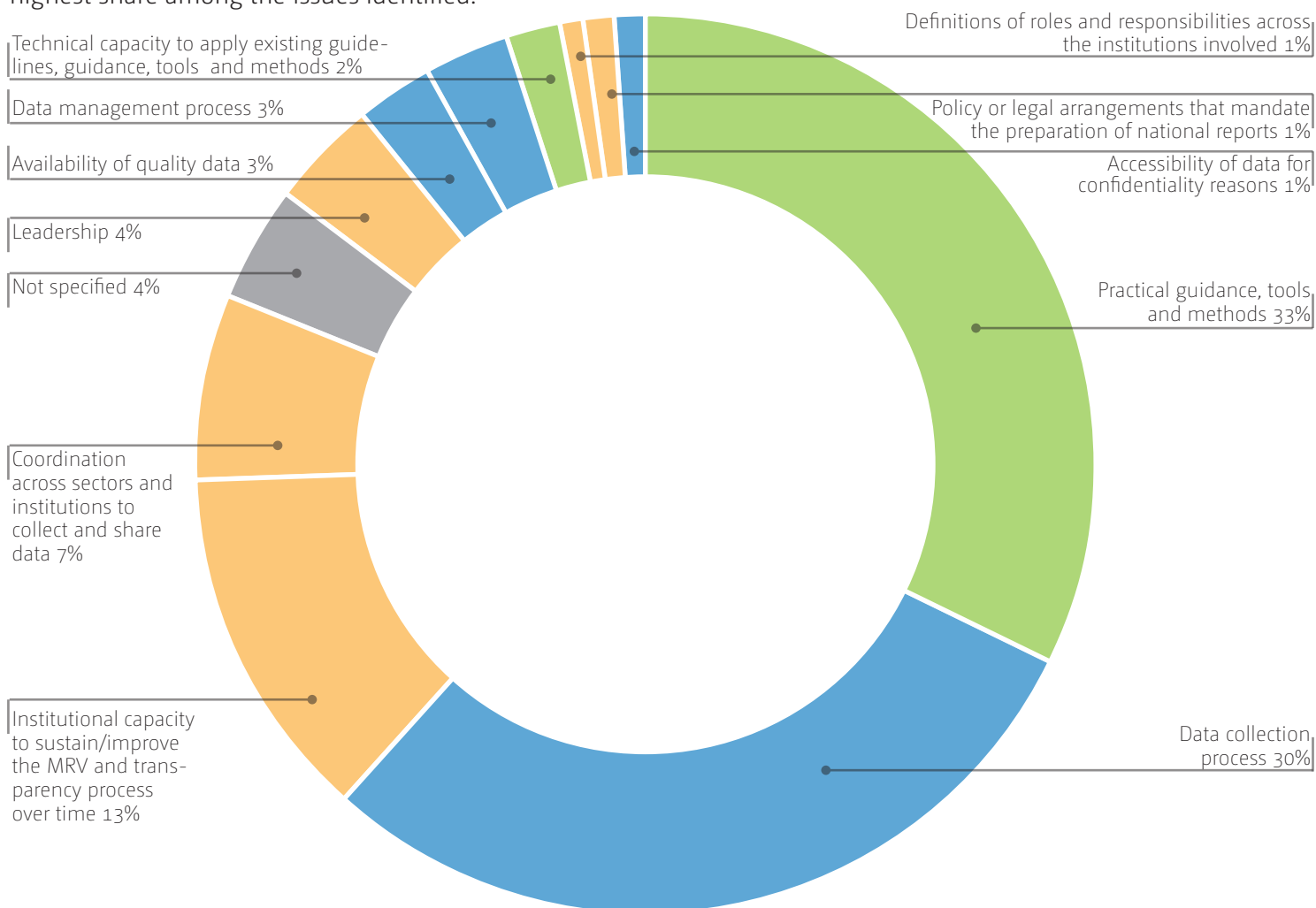




REPORTING ON SUPPORT NEEDED AND RECEIVED

GLOBAL PICTURE

With regard to reporting on support needed and received, challenges and capacity-building needs in the area of data and information were reported most frequently by developing country Parties (36 per cent), followed by those in the areas of methodology and tools (35 per cent) and institutional arrangements (26 per cent). In particular, challenges related to 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 measurement, reporting and verification and transparency process over time (13 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.



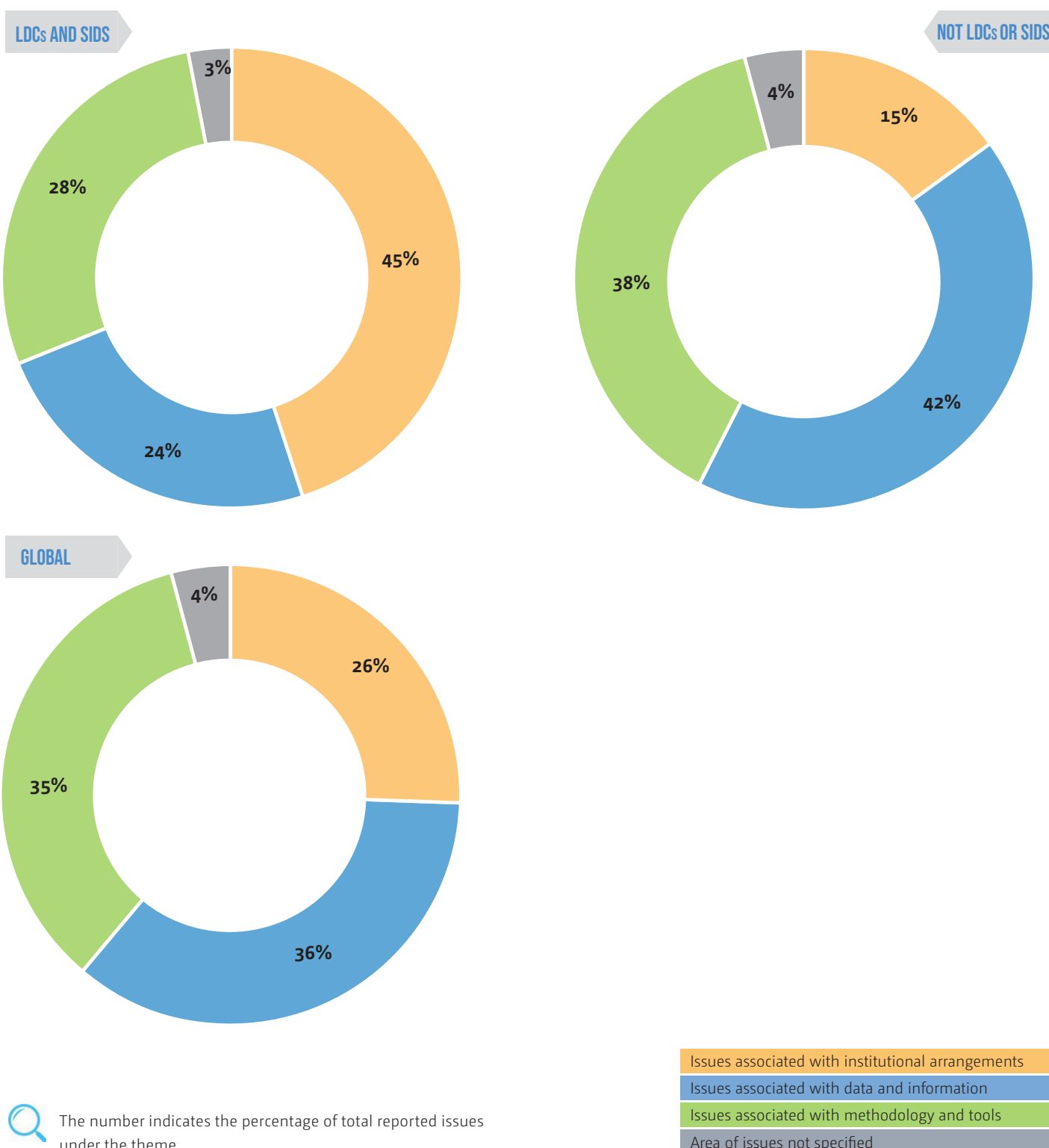
INSTITUTIONAL CAPACITY TO SUSTAIN/IMPROVE THE MRV AND TRANSPARENCY PROCESS OVER TIME Several developing country Parties expressed the need to strengthen institutional arrangements for the continuous provision of higher-quality data on support. They see value in this as it could serve as a basis for the assessment of constraints and gaps in relation to the support needed to unlock the barriers to implementing mitigation and adaptation actions. Some developing country Parties also expressed the need to enhance expertise and institutional arrangements for mobilization of funding to support national climate change plans.

PRACTICAL GUIDANCE, TOOLS AND METHODS Several developing country Parties noted that there is no coherent or common definition of climate finance or of the approach to classifying, monitoring and reporting on climate finance, with publications and reports on this topic often inconsistent. Some developing country Parties highlighted the need for a clear methodology and clear guidance to ensure that climate finance is accounted for, assessed and reported consistently. Further, several developing country 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 developing country Parties expressed the need to strengthen the capacity of national entities to identify and report the technology needs for implementing territorial and sectoral climate change management plans, including in identifying the criteria for categorizing and differentiating the financial, technical and technology needs in a standardized manner.

DATA COLLECTION PROCESS Many developing country Parties find it challenging to collect data and information on support needed and received owing to the 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 institutions and civil society organizations). Some developing country 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 the preparation of national communications and biennial update reports.

PICTURE BY GROUP OF DEVELOPING COUNTRY PARTIES RELATED TO SUPPORT NEEDED AND RECEIVED

The percentage breakdown by area of the reported challenges and capacity-building needs related to reporting on support needed and received differed among the groups of developing country Parties. The group consisting of developing country Parties that are not LDCs or SIDS reported a higher share of issues related to data and information, and methodology and tools, but a much lower share of issues pertaining to institutional arrangements compared with the group consisting of the LDCs and SIDS. See the diagrams below for a breakdown of the areas identified by the different groups of developing country Parties.

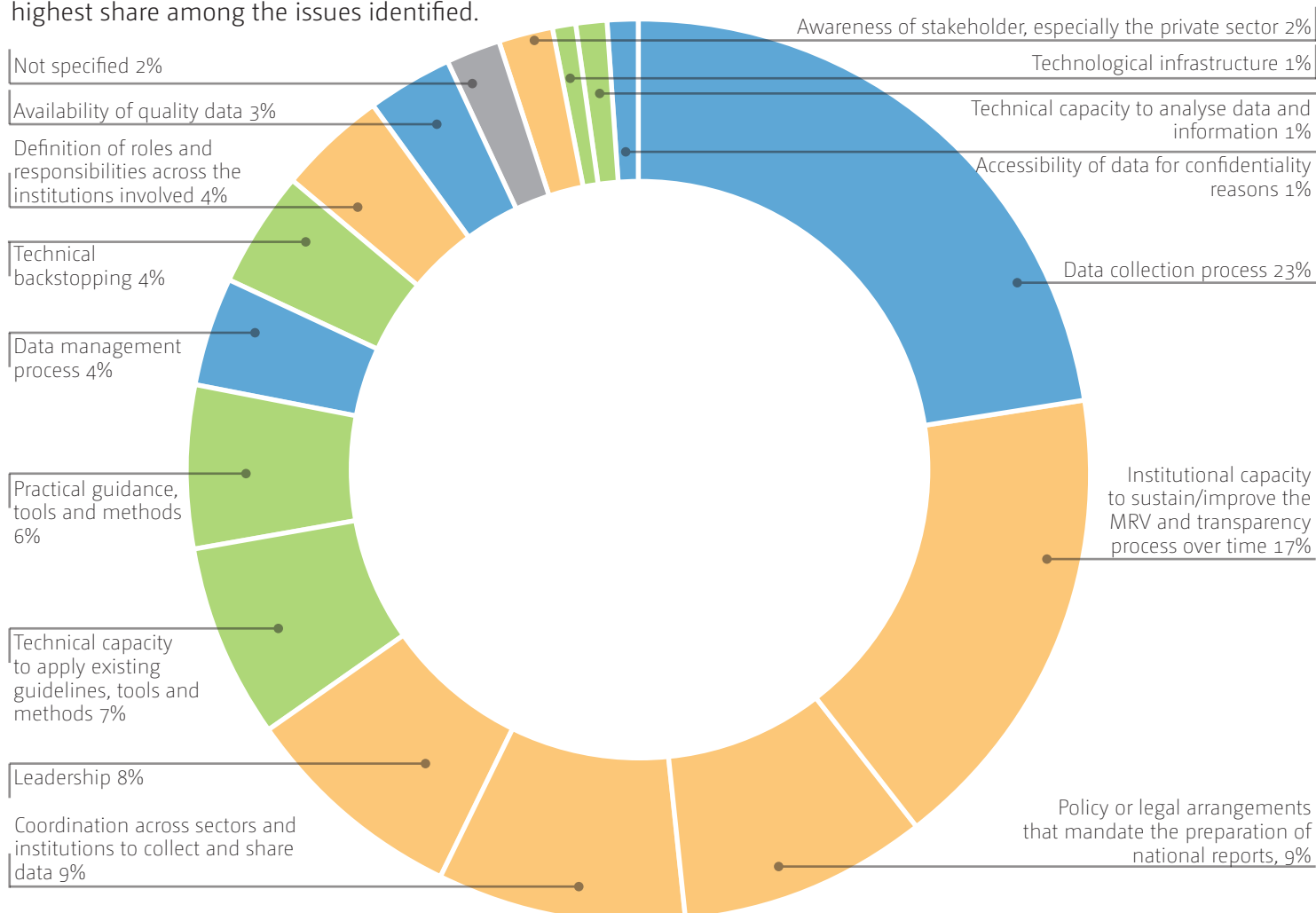




CROSS-CUTTING ISSUES

GLOBAL PICTURE

With respect to cross-cutting issues, 48 per cent of the challenges and capacity-building needs reported by developing country Parties 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 the 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 measurement, reporting and verification 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). The diagram below summarizes the cross-cutting issues identified by category. See the boxes for examples from the three categories with the highest share among the issues identified.



COORDINATION ACROSS SECTORS AND INSTITUTIONS TO COLLECT AND SHARE DATA Many developing country Parties reported challenges due to the lack of a coordination mechanism for data sharing among various stakeholders, which sometimes results in conflicts between ministries and agencies. Formalizing institutional arrangements for data provision will help to enhance data quality and avoid delays in data submission. Several developing country Parties reported that it is important to communicate to stakeholders the mutual benefits of measurement, reporting and verification activities in order to incentivize their engagement and boost commitment. Some developing country Parties identified the need to improve institutional coordination structures at both the cross-ministerial level (horizontal) and between national and subnational authorities (vertical).

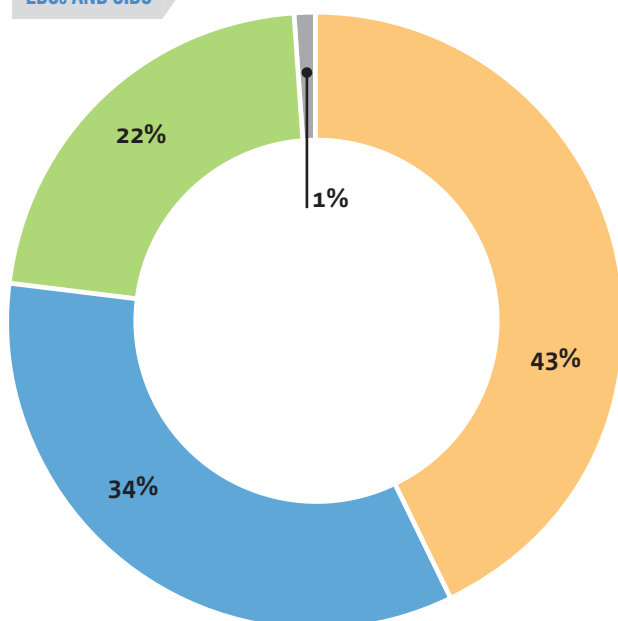
INSTITUTIONAL CAPACITY TO SUSTAIN/IMPROVE THE MRV AND TRANSPARENCY PROCESS OVER TIME Many developing country Parties reported that national reports are prepared on an ad hoc basis and do not result in the establishment of a permanent process or team of national experts. Recognizing the enhanced reporting requirements under the enhanced transparency framework, 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 is considered to have a key impact on longer-term measurement, reporting and verification activities. Therefore, some developing country 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 sectoral reporting is retained over time, while ensuring an adequate level of financial resources. Some developing country 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 use in national reports.

DATA COLLECTION PROCESS Several developing country Parties expressed the need to further enhance the data collection process. A key point identified is the need to automate the data collection process and build a measurement, reporting and verification system that encompasses all areas (support, mitigation and adaptation). The improved system will 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 explore synergies with other national reporting needs such as on progress in relation to the Sustainable Development Goals.

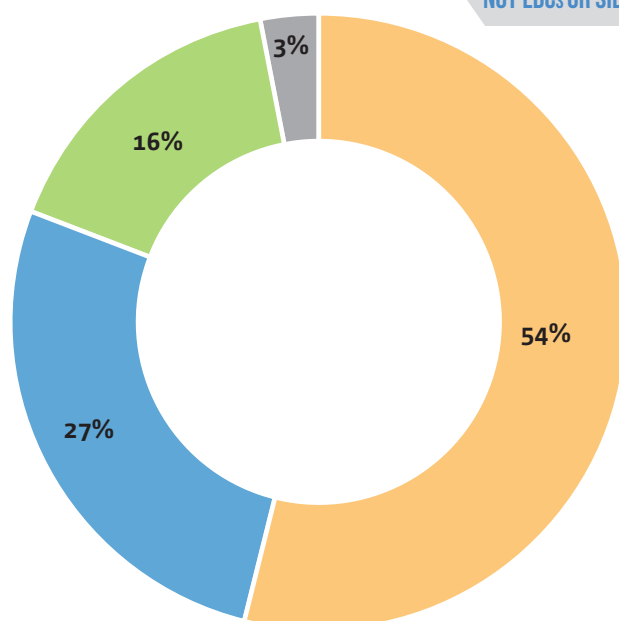
PICTURE BY GROUP OF DEVELOPING COUNTRY PARTIES RELATED TO CROSS-CUTTING ISSUES

The percentage breakdown by area of the reported challenges and capacity-building needs related to cross-cutting issues differed among the groups 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 group of developing country Parties that are not LDCs or SIDS reported an approximately 11 per cent higher share of issues related to institutional arrangements compared with the group consisting of the LDCs and SIDS. See the diagrams below for a breakdown of the areas identified by the different groups of developing country Parties.

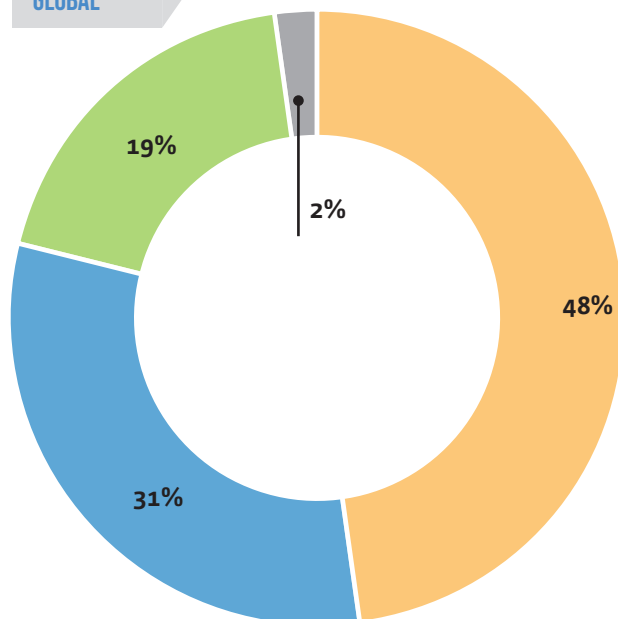
LDCs AND SIDS



NOT LDCs OR SIDS



GLOBAL



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.

