



**CBIT-GSP**  
CLIMATE TRANSPARENCY



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# Reporting Gaps and Inconsistencies, Capacity Gap Analysis and Best Practice

## *BTR Cross Cutting Elements*

*CBIT-GSP Knowledge Product Series*  
**2025**



## CBIT-GSP BTR Quality Assurance

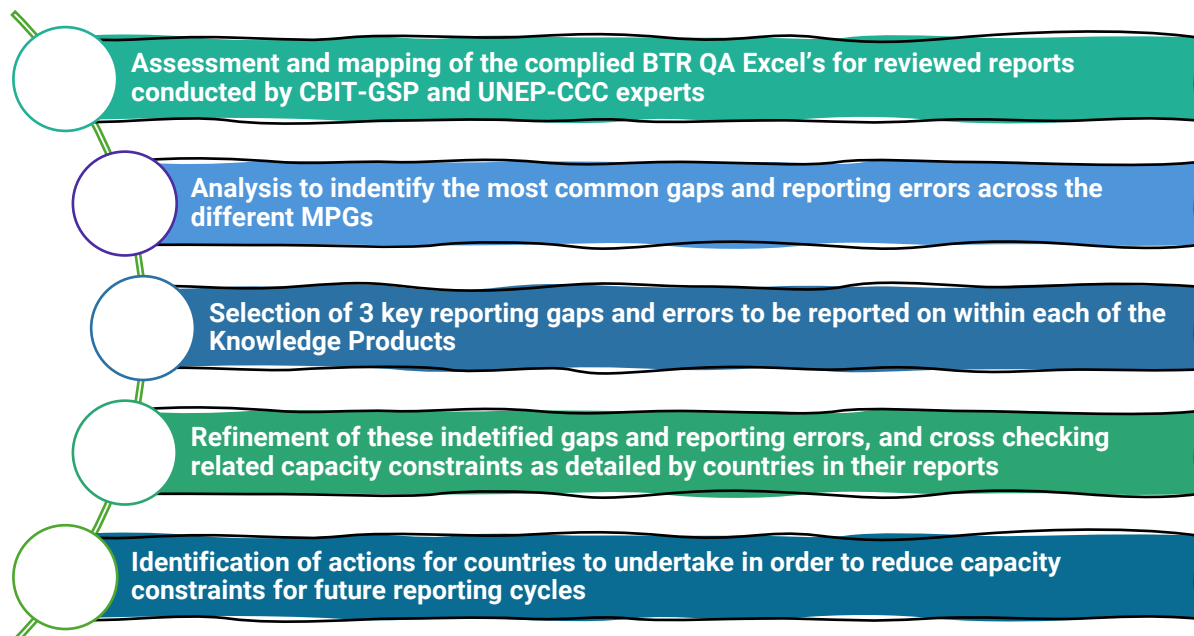
Through the CBIT-GSP project, countries within the 10 Transparency Networks can request support for preliminary peer-to-peer quality assurance checks of their BTRs prior to submission to the UNFCCC.

In 2024, CBIT-GSP conducted over 40 of these QA checks, using an internal MPG-aligned Excel review tool. In this peer-to-peer process, the CBIT-GSP team and other UNEP-CCC experts offered prescriptive feedback on structure, content, and alignment of their BTRs, or specific chapters, against the Modalities, Procedures and Guidelines (MPGs), providing recommendations and opportunities for countries to enhance their reporting prior to submission. In conducting these reviews, a number of common gaps, inconsistencies, and reporting challenges were identified across the different chapters. Using the information gathered by the CBIT-GSP undertaking these reviews, a set of knowledge products which consolidates the lessons learned from the QA reviews, with a focus on identifying systemic gaps and assessing the capacity support required to enhance future BTR submissions has been developed. By highlighting recurring issues and showcasing best practices, it aims to contribute to improved reporting quality and greater transparency under the Paris Agreement.

This knowledge products contains the information on the general and cross-cutting gaps identified across all chapters of the BTRs.

### Approach

The approach of the gaps and reporting inconsistencies assessment, and the subsequent capacity review was conducted using the following method:



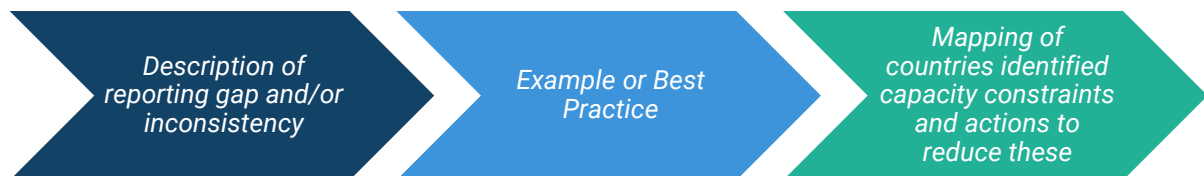


From this approach, a number of frequent cross-cutting reporting issues across the BTR were identified during the analysis of the QA reviewed BTR's. This knowledge product focuses on 3 of the most significant and impactful areas that countries need to improve reporting standards on:

1. *Use of flexibility and improvement plans*
2. *Methodological and approach description within BTR*
3. *BTR Completeness and notation keys*

The aim of this knowledge product is to focus on the cross-cutting areas across the BTR which were reported on incorrectly or with inconsistencies, and not on where gaps have occurred as a result of utilising flexibility provisions in a manner that has **excluded it entirely from the BTR**. Information the use of flexibility and capacity gaps, will be presented in a dedicated knowledge product under this knowledge product series.

For each of the areas of focus detailed within this knowledge product, the following information is set out:





## Use of Flexibility Provision

**The first area where significant gaps and inconsistencies were identified was in the use of flexibility provisions and the resulting improvement plans countries should develop in lieu of adhering to these provisions**

Developing countries, under the MPGs, in light of limited reporting capacities and constraints are able to utilise dedicated flexibility provisions across the BTR chapters. These flexibility provisions aim to ease the reporting burden, recognizing national circumstances from developing countries differ from those of developed countries. The use of flexibility provisions by developing countries are self-determined, and their use ensures that transparency remains universal across all Parties but is also practical and fair for countries that face resource, technical, or institutional constraints.

To maintain trust and integrity, countries must clearly indicate:

- *Why they are applying a flexibility provision,*
- *Which flexibility provision they are using, and where possible, it is useful for countries to reference to the specific paragraph of the MPGs, however this is not a requirement,*
- *Plans or actions they are undertaking to improve reporting over time included within the inventory or BTR improvement plan, which would contribute to reducing the reliance on utilising flexibility provisions in the future.*

By fully providing details on the use flexibility, this builds confidence among Parties and helps ensure that all countries are working towards improving their reporting systems. By not properly detailing the process of determining the use and reasoning for the flexibility provision, countries could face review comments in the TER provision and could lead reviews to note that some areas of the BTR are incomplete.

Table 1 below, provides details of the areas in the BTRs where developing countries can adhere to the use of the flexibility provisions, and examples of how this can be used.

Table 1: Flexibility provisions

Reporting Elements	MPG Paragraph	Exact Flexibility Provision Text	Example of Use
Key category analysis	37	"Developing country Parties that need flexibility in light of their capacities may identify key categories qualitatively or using a threshold of between 85 and 95 per cent."	A country uses an 85% cumulative threshold for key categories instead of 95%.
Uncertainty assessment	54	"Developing country Parties that need flexibility... may report only a qualitative uncertainty assessment for key categories."	A country provides a qualitative (descriptive) uncertainty analysis for major emission sources.
Insignificance threshold for 'NE' (Not Estimated)	48	"Developing country Parties that need flexibility... may consider an emission category insignificant if it contributes less than 0.1% of the national total and less than 1000 kt CO <sub>2</sub> eq."	A country reports "NE" for a small source like SF <sub>6</sub> emissions if it meets the 0.1% and 1000 kt threshold.
QA/QC procedures	59	"Developing country Parties that need flexibility... are encouraged to implement general inventory QC procedures."	A country documents basic QA/QC procedures but have not yet developed a full plan.
GHG coverage	45	"Each Party shall report at a minimum on CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> O... Developing country Parties that need flexibility... may report other gases (HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub> ) if included in the NDC or previously reported."	A country reports only CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O due to limited data and capacity.
Time series (latest year)	55	"Each Party shall report estimates for the year no more than two years prior... Developing country Parties that need flexibility... may instead report for the year three years prior to the submission."	A 2024 BTR submission includes inventory data up to 2020 instead of 2021.
Time series (start year)	57	"Each Party shall report a consistent annual time series from 1990 onwards... Developing country Parties that need flexibility... may instead report the reference year/period of their NDC and from 2020 onward."	A country reports only from 2020 and not from 1990 because earlier data are unavailable.
Tracking progress towards NDC	66	"Developing country Parties that need flexibility... can apply flexibility to use the most appropriate methodologies and parameters available..."	A country tracks mitigation progress using nationally appropriate methods rather than full IPCC guidelines.
Accounting for NDCs	77	"Developing country Parties that need flexibility... can instead include key categories of anthropogenic emissions and removals."	A country reports only emissions from energy and agriculture sectors for NDC tracking.
Adaptation reporting	102	"Developing country Parties that need flexibility... may provide the information on adaptation... in a manner practicable and to the extent possible."	A country shares adaptation efforts in general terms without detailed impact indicators.
Technical Expert Review response time	154	"Developing country Parties that need flexibility... may request additional time to respond to the questions raised by the technical expert review team."	A Party asks for an extended deadline during the review process.



**Table 2 below provides a summary of some of the identified and common reporting errors associated to flexibility.**

*Table 2: Summary of reporting error for flexibility*

Common reporting error	Description	Example
<b>Failure to indicate use of flexibility</b>	Parties applied flexibility without stating they were doing so.	Using Tier 1 methods in the GHG inventory but not explaining why.
<b>No reference to relevant MPG paragraph</b>	Parties did not cite the specific flexibility provision.	Simply writing "due to capacity constraints" without linking to the relevant MPG paragraph (e.g., para. 6, para. 54, etc.).
<b>No justification provided</b>	Parties did not explain the capacity limitation that justified flexibility use.	Reporting only key categories without explaining limited data availability.
<b>No information on how flexibility was applied</b>	Parties did not describe what flexibility changed in their reporting approach.	Reporting a limited time series but not stating how the start year was selected.
<b>No plan to improve over time</b>	Parties failed to mention actions being taken to eventually meet full requirements.	No mention of efforts to develop country-specific emission factors or data systems.
<b>Inconsistent or partial reporting</b>	Flexibility was mentioned in one section but ignored in related sections.	Claiming limited uncertainty analysis but elsewhere stating high inventory confidence without reconciliation.
<b>Using flexibility when not needed</b>	Some Parties claimed flexibility even when capable of meeting full requirements.	Reporting qualitative uncertainty when quantitative analysis was actually available.

**As stated previously, to properly address the use of flexibility when countries elect to use them, developing countries should clearly and systematically report the following elements:**

- Identify the specific flexibility provision being applied, which can include the relevant MPG paragraph reference.
- Explain why flexibility is being used, describing the national circumstances or capacity constraints that justify its application (e.g., lack of data, limited institutional capacity, financial or technical limitations).
- Describe how the Party applied the flexibility in practice – what was different compared to the standard reporting requirement.
- As a part of the inventory improvement plan or BTR improvement plan, countries should outline actions taken or planned to reduce reliance on flexibility over time, such



as capacity-building programs, technical improvements, institutional reforms, or data system upgrades

- Ensure consistency across the report, so when flexibility is used in one section (e.g., GHG inventory, tracking progress), it should be consistently referenced in the corresponding areas (narrative sections of the report, CRTs and CTF tables, annexes).

### Best Case Example: Flexibility Table, GHG Inventory

Figure 1 below shows the way Country A has presented the use of the flexibility provisions within their BTR, as it relates to the GHG Inventory. This table is a good example of a clear and concise way in which flexibility can be discussed in the narrative of the BTR. By including this table within a dedicated section of the chapter, readers and reviewers can easily refer back to this information. Country A has clearly stated which flexibility provision has been used (including the MPG paragraph), where this has been used, a description of its use, the associated capacity constraint, as well as noting any associated improvements.

MPG flexibility provision	Year	Sector	Category	Gas	Description of the application of flexibility	Clarification of capacity constraint	Progress made in addressing areas of improvement
Key categories (para. 25)	All	All	All	All	The Country has elected to use a threshold for the key category analysis of 85%.	It was chosen to focus on limited resources to improve reporting on the most important key categories, and particularly where data collection could be done relatively quickly.	This is the first BTR submission. Progress will be documented in the second BTR.
Uncertainty assessment (para. 28)	All	All	All	All	The Country provided a <u>qualitative</u> discussion of the latest inventory year/trend	The Country does not have sufficient resources to develop a proper uncertainty assessment.	This is the first BTR submission. Progress will be documented in the second BTR.
Completeness (para. 32)	All	All	All	All	The Country considered emissions to be insignificant when the likely level of emissions was below 0.1% of total GHG emissions or 1000 kt CO <sub>2eq</sub> .	Resources were insufficient to collect all data and estimate all categories.	This is the first BTR submission. Progress will be documented in the second BTR.
QA/QC (paras. 34 and 35)	All	All	All	All	The Country has not yet developed a QA/QC plan.	The Country does not have sufficient resources to develop a QA/QC plan.	This is the first BTR submission. Progress will be documented in the second BTR.
Gases (para. 48)	All	All	All	All	The Country included only the 3 following gases: CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> O.	The Country does not have sufficient data and resources to estimate all gases and collect the corresponding activity data.	This is the first BTR submission. Progress will be documented in the second BTR.
Time series (paras 57 and 58)	2024	All	All	All	<ul style="list-style-type: none"> <li>• Report data cover the annual time series of 2020 onward.</li> <li>• The Country included the most recent year of 2021 in its 2024 BTR submission (i.e. three years prior to the year of submission)</li> </ul>	Activity data were not available for all sectors for years prior to 2020 and for 2022, two years prior to the year of submission.	This is the first BTR submission. Progress will be documented in the second BTR.

Figure 1: Flexibility Presentation, Country A

### Capacity Mapping

Table 3 details the identified Capacity constraints along with the corresponding actions which countries could implement in order to reduce this capacity.

Table 3: Capacity Mapping on the use of flexibility

Capacity Constraints	Actions to reduce capacity constraint
Lack of understanding of how to utilise the flexibility provisions	<ul style="list-style-type: none"> <li>• <i>Dedicated training on the breakdown of flexibility provisions to be used in the BTR, including how to use them and how associated improvements can be formulated to address capacity constraint.</i></li> </ul>
Lack of understanding of the details of the MPGs	<ul style="list-style-type: none"> <li>• <i>In-depth training on MPG breakdown, including the main should, shall and may requirements for Developing Parties</i></li> </ul>



## Methodological Approach and Description

**The next area where there were multiple inconsistencies was in the information presented on methodological approaches and the overall descriptive information detailed within the body of the BTR.**

Across all chapters of the BTR, but most significant to the GHG Inventory and NDC Tracking chapters, countries provide extensive information across a number of technical areas. In the case of GHG Inventory, countries are detailing large summaries of data and resulting emissions across their sectors and categories, and for NDC tracking, countries are providing extensive details on targets, indicators, results and projections. This information is all detailed extensively within the CRTs and CTFs of the BTR and their dedicated chapters. However, key to providing the information within these tables is ensuring that the approaches, methodologies and processes that were undertaken are articulated clearly and transparently within the body of the reporting document.

The review team found across a high number of the BTRs checked that there was inconsistency in the level of detail, if at all, on processes and methodologies. Information detailed within CTFs, especially in the case of the NDC tracking chapter, was often not included within the report, and key assumptions and steps in generating the national emission inventories were not detailed. In some cases, information could not be ascertained from the content of the tables.

It is essential that countries include the essential information as it relates to methodologies and approaches within their reports. This is especially key when countries' BTRs undergo the official TER process. It is important to note that the overall aim of the ETF and BTR is to ensure that countries are reporting on progress transparently, clearly, consistently, and accurately. Reporting with these key principals in mind is not possible without the appropriate information included in both the reports and the tables.

### **Best Practice Example:**

In November 2024, the CBIT-GSP Review team conducted the QA check of Malaysia's draft BTR, and following this process, Malaysia successfully submitted their 1<sup>st</sup> BTR in December 2024.

For the Tracking of Progress of the NDC component of their BTR, Malaysia submitted the CTF tables and corresponding narrative chapter within the BTR. Malaysia's approach to including details on methodology within the CTF 3 and providing supporting narrative detail within the chapter can be used as a best practice example.

- [Link to Malaysia submitted CTFs](#)
- [Link to Malaysia BTR submission](#)

In Malaysia's submission, they have provided ample detail within the body of CTF 3, as well as indicating clearly where certain provisions under CTF 3 are not applicable to the information they are reporting on. This level of detail in similarly support through a clear and concise summary of methodology approaches included within the content of the NDC Tracking chapter of the BTR.





## Capacity Constraints Mapping:

**Table 4 details the identified Capacity constraints that countries identified as contributing to the gaps and inconsistencies as it related to methodological approach and description, along with the corresponding actions which countries could implement in order to reduce this capacity.**

Table 4: Capacity mapping for methodological approaches and description

Capacity Constraints	Actions to reduce capacity constraint
Lack of internal resources	<ul style="list-style-type: none"> <li>• Workshop for development of roadmap for developing BTR planning processes to ensure there are adequate resources internally to dedicated to compilation and writing of the BTR.</li> <li>• Development of internal training materials for new staff on the requirements on the type and level of detail to be included within the descriptive parts of the BTR.</li> <li>• Webinar on the NID template for BTR submission to allow for a streamlined approach to all information within the GHG Inventory Chapter</li> </ul>
Time constraints in BTR development timeframes	<ul style="list-style-type: none"> <li>• As above, workshop and training on the development of robust BTR planning processes to ensure there is adequate amounts of time to develop BTRs and for their content to adhere to the requirements of the MPGs.</li> <li>• Development of QA/QC Plan and procedures.</li> <li>• Workshop on Institutional Arrangements mapping to stocktake current IA and how these can be enhanced in order to allow for more robust BTR cycles.</li> </ul>



## BTR Completeness and Notation Keys

**One of the most significant areas where inconsistencies and errors in reporting was found was in BTR completeness and the use of the required notation keys throughout the BTR.**

Across the BTR, countries are required to provide information relating on the overall assessment of completeness of the information detailed. In instances where information and data are not available or complete, countries are required to use notation keys in the place of numerical figures, in both the common reporting and the common tabular format tables. In the cases of this, countries are additionally required to report on the reasons for the lack of completeness, for both any methodological and data gaps, within the content of the report.

This use of notation keys, as well as providing the required level of detail on completeness across the BTR, is an area in which countries were making frequent errors, either by failure to utilise the notation keys or using the notation keys incorrectly and inconsistently. Table 5 below details the 6 different notation keys, as well as their definitions and how these should be used in the place of numerical data.

Table 5: Notation Keys under MPGs

Notation Key	Description
<b>NO</b>	Not occurring for categories or processes, including recovery, that do not occur within a Party.
<b>NE</b>	Not Estimated: for activity data and/or emissions by sources and removals by sinks of GHGs that have not been estimated but for which a corresponding activity may occur within a Party; Where “NE” is used by a Party to report emissions or removals of CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub> , HFCs, PFCs, SF <sub>6</sub> or NF <sub>3</sub> , the Party must indicate in both the NID and the CRT 9 why such emissions or removals have not been estimated.
<b>NA</b>	Not Applicable: for activities under a given category that do occur within the Party but do not result in emissions or removals of a specific gas; If the cells for categories in the CRT for which “NA” is applicable are shaded gray they do not need to be filled in.
<b>IE</b>	Included Elsewhere: for emissions by sources and removals by sinks of GHGs estimated but included elsewhere in the inventory instead of under the expected category. Where “IE” is used, the Party should indicate, in CRT 9 where in the inventory the emissions or removals for the displaced source or sink category have been included and explain the deviation.
<b>C</b>	Confidential: for emissions by sources and removals by sinks of GHGs where the reporting would involve the disclosure of confidential information.
<b>FX</b>	Flexibility: for cells where data are not available or reported because of the a flexibility provision applied by a Party that needed flexibility in the light of its capacity.

### Examples:

The below example showcases the manner in which an example country has presented data relating to the Energy sector of their national inventory.



GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFC	PFC	Unspecified mixture of HFCs and PFCs (1)	SF <sub>6</sub>	NF <sub>3</sub>	NO <sub>x</sub>	CO	NMVOCS	SO <sub>2</sub>	Total GHG emissions (CO <sub>2</sub> equivalents (Gigagrams))
	Gigagram Emissions			Gigagram equivalent CO <sub>2</sub>			Gigagram Emissions						
<b>TOTAL GREENHOUSE GAS EMISSIONS</b>	98,206.791	310.214	12.944	21,629.543	-	-	-	-	46.309	1,124.728	-	-	133,123.573
<b>1 ENERGY</b>	23,693.890	18.647	1.048	-	-	-	-	-	-	-	-	-	24,493.758
<b>2 INDUSTRIAL PROCESSES AND USES OF CROSS-SECTIONAL PRODUCTS</b>	19,781.788	-	-	21,629.543	-	-	-	-	-	-	-	-	41,411.331
<b>3 AGRICULTURE</b>	47.748	174.481	10.749	-	-	-	-	-	46.309	1,124.728	-	-	8,952.806
<b>4 LAND USE, LAND-USE CHANGE AND FORESTRY</b>	54,676.802	-	-	-	-	-	-	-	-	-	-	-	54,676.802
<b>5 WASTE</b>	6.564	117.086	1.147	-	-	-	-	-	-	-	-	-	3,588.875

Figure 2: Country Example, use of notation keys

- The country has provided an overall summary of their inventory within the opening sections of their GHG Inventory Chapter of the BTR. While they have provided an overview of the emissions from relevant sectors and gases, the country has not used any notation keys, and in their place used ‘-’.
- It is not clear what these dashes specifically refer to, and as a result, it can not be understood from this table why emissions are not reported on across the sectors and gases.
- The use of the ‘-’ could signify that there are no emissions resulting from the gases of these key sectors, or it could signify that these gases do not occur within their country.
- While information provided within the body of the report may provide supplementary information that clarifies the use of the dashes, it should be clear from the table on the information presented.

The second example below is taken from another country's BTR submission. The figure below showcases a portion of the country's table showcasing overall completeness across the sectors, categories and sub-categories of their GHG Inventory.

Categories	Emissions			Emissions				Emissions				
	[Gg]			CO <sub>2</sub> e[Gg]				Gg				
	Net CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	Other haloge	Other haloge	NO <sub>x</sub>	CO	NMVOCS	SO <sub>2</sub>
<b>Total National Emissions and Removals</b>	39,359.75	1,258.03	19.1	328.3	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO, NE	NA, NO, NE	NA, NO, NE	NA, NO, NE
<b>1 - Energy</b>	9,993.45	12.09	0.6	NA	NA	NA	NA	NA	NO, NE	NO, NE	NO, NE	NO, NE
1.A - Fuel combustion activities	9,993.45	12.09	0.6	NA	NA	NA	NA	NA	NO, NE	NO, NE	NO, NE	NO, NE
1.B Fugitive emissions from fuels	NO	NO	NO	NA	NA	NA	NA	NA	NO	NO	NO	NO
1.C - Carbon dioxide Transport and Storage	NO	NA	NA	NA	NA	NA	NA	NA	NO	NO	NO	NO

Figure 3: Country example of table of completeness

- The country presented the following information within a dedicated section on completeness of their GHG Inventory. This section provided a overview of the different notation keys, before presenting the full table breakdown of all categories and sub-categories of their inventory.
- They have used the notation keys clearly, indicating where emissions from categories/sub-categories are not applicable, estimated or occurring within their national inventory.
- The use of this table, as well as including it within a dedicated section of the report, provides clarity on the information which will be detailed within the body of the inventory/chapter.
- While this is a very good example and approach that other countries should consider using within their own BTRs, the country could have additionally provided more detail into the specific categories and sub-categories where NE has been used.



## Capacity Constraints Mapping

**Based on the assessment undertaken for this report Table 6 details the identified Capacity constraints** that countries identified as contributing to the gaps and inconsistencies as it related to completeness and the use of notation keys, along with the corresponding actions which countries could implement in order to reduce this capacity.

Table 6: Capacity mapping on the use of notation keys

Capacity Constraints	Actions to reduce capacity constraint
Technical capacity gaps in compiling information in the CRTs and CTFs	<ul style="list-style-type: none"><li>• Training on filling in the CRTs and CTFs (where notation keys are applicable)</li></ul>
Use of inventory software/tools	<ul style="list-style-type: none"><li>• Dedicated in-country workshop on the use of inventory software tools</li></ul>
Lack of knowledge on the use of notation keys	<ul style="list-style-type: none"><li>• Webinar on the use of notation keys, how they should be used, and associated improvements required for 'NE' notation keys</li></ul>