



Subsidiary Body for Implementation

Fifty-second to fifty-fifth session

Glasgow, 31 October to 6 November 2021

Item 4(b) of the provisional agenda

**Reporting from Parties not included in Annex I to the
Convention**

**Report (for 2020 and 2021) and terms of reference of the
Consultative Group of Experts**

Virtual regional hands-on training workshops on institutional arrangements for measurement, reporting and verification and the enhanced transparency framework, including data management for national greenhouse gas inventories

Report by the secretariat

Summary

As part of its workplan for 2021, the Consultative Group of Experts organized a series of virtual regional hands-on training workshops on institutional arrangements for the existing measurement, reporting and verification arrangements and the enhanced transparency framework under the Paris Agreement, including data management for national greenhouse gas inventories. The main objective of the workshops was to enhance the technical capacity of experts from developing country Parties to establish or strengthen their institutional arrangements to facilitate the implementation of existing measurement, reporting and verification arrangements under the Convention and prepare for the implementation of the enhanced transparency framework under the Paris Agreement. This report outlines the proceedings of the workshops and summarizes the discussions that took place.



Abbreviations and acronyms

BTR	biennial transparency report
BUR	biennial update report
CGE	Consultative Group of Experts
COP	Conference of the Parties
COVID-19	coronavirus disease 2019
ETF	enhanced transparency framework under the Paris Agreement
GHG	greenhouse gas
ICA	international consultation and analysis
IPCC	Intergovernmental Panel on Climate Change
MPGs	modalities, procedures and guidelines
MRV	measurement, reporting and verification
NC	national communication
NDC	nationally determined contribution
NGO	non-governmental organization
QA/QC	quality assurance/quality control
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SBI	Subsidiary Body for Implementation

I. Introduction

A. Mandate

1. COP 24 decided to extend the term of the CGE for eight years, from 1 January 2019 to 31 December 2026.¹ The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement decided that the CGE shall serve the Paris Agreement, starting from 1 January 2019, to support the implementation of the ETF.²

2. The CGE, at its 5th meeting, agreed to organize, as part of its workplan for 2021,³ a series of virtual regional hands-on training workshops on institutional arrangements for the existing MRV arrangements and the ETF, including data management for national GHG inventories, and to discuss key considerations for institutional arrangements to support the transition to the ETF. The CGE requested the secretariat to make the necessary arrangements to organize the virtual training workshops.

3. While fully aware that virtual training workshops cannot replace in-person training workshops, the CGE decided to deliver the planned workshops virtually with a view to ensuring that it would be able to provide technical advice and support to developing country Parties without interruptions due to the impacts of the COVID-19 pandemic.

4. COP 19 requested the CGE to submit an annual progress report on its work to the SBI for consideration at the sessions of the SBI held in conjunction with the sessions of the COP.⁴

B. Scope of the report

5. As part of the annual reporting by the CGE on the progress of its work,⁵ this report contains a summary of the proceedings of and discussions at the virtual regional hands-on training workshops held in 2021.

C. Possible action by the Subsidiary Body for Implementation

6. The SBI will be invited to consider this report and to provide guidance, as appropriate, to the CGE.

II. Proceedings

7. Between June and September 2021, in view of language and time differences between regions, the CGE conducted six virtual regional hands-on training workshops on institutional arrangements for the existing MRV arrangements and the ETF, including data management for national GHG inventories (see the table below). A total of 313 participants⁶ (49 per cent female and 51 per cent male) from 90 developing country Parties were trained at the workshops.

¹ Decision 11/CP.24, para. 1.

² Decision 18/CMA.1, para. 15.

³ Available at <https://unfccc.int/documents/268792>.

⁴ Decision 19/CP.19, para. 7.

⁵ See document FCCC/SBI/2020/15 for the 2020 progress report of the CGE.

⁶ The number of registered participants connected; in some cases, more than one person may have participated through a single connection.

Consultative Group of Experts virtual regional hands-on training workshops conducted in 2021

<i>Date</i>	<i>Time^a</i>	<i>Region(s)/subregion(s)</i>	<i>Language</i>	<i>Number of countries represented</i>	<i>Number of participants (male/female)</i>	<i>Number of CGE resource persons</i>
22–24 June	10 a.m. to 1 p.m.	Asia-Pacific, Eastern Europe, and Western Europe and other	English	21	57 (33/24)	4
29 June to 1 July	11 p.m. to 2 a.m.	Pacific	English	4	24 (12/12)	2
5–7 July	4–7 p.m.	Africa, and Latin America and the Caribbean	English	27	93 (51/42)	3
13–15 July	10 a.m. to 1 p.m.	Africa, and Latin America and the Caribbean	French	8	15 (11/4)	2
7–9 September	4–7 p.m.	Africa, Latin America and the Caribbean, and Western Europe and other	Spanish	16	62 (24/38)	1
13–15 September	10 a.m. to 1 p.m.	Middle East and North Africa	Arabic	10	45 (24/21)	3
13–15 September	10 a.m. to 1 p.m.	Asia-Pacific, Eastern Europe, and Western Europe and other	Russian	4	17 (4/13)	3

^a Central European Summer Time.

A. Background

8. The ETF builds on and enhances the existing MRV arrangements under the Convention. With the adoption of the MPGs for the ETF at COP 24⁷ and the corresponding common reporting tables, common tabular formats and outlines for reporting expected to be finalized at COP 26, many developing country Parties are already planning, and some are already taking, their first steps to transition to the ETF.

9. While reporting under the Convention through NCs will continue, BURs and the ICA process under the Convention will eventually be superseded by BTRs and the technical expert review and facilitative, multilateral consideration of progress processes under the Paris Agreement. The final BURs by developing country Parties will be submitted no later than 31 December 2024, and Parties shall submit their first BTRs and national inventory reports on or before that date.⁸

10. Developing country Parties' reporting in their NCs and BURs, the CGE stocktake survey conducted in 2020 and the technical analysis of BURs have shown that national experts continue to require capacity-building for implementing the existing MRV arrangements. The key areas of capacity-building needs in preparing for the implementation of and transition to the ETF are:

(a) Enhancing knowledge of the MPGs for the ETF and understanding of the areas of enhancement of the ETF as they relate to the existing MRV arrangements and how best to address them;

(b) Enhancing knowledge and technical capacity of methodologies and tools, especially for tracking progress of the implementation and achievement of NDCs and the transition from the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* to the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*;

⁷ Decision 18/CMA.1, para. 1.

⁸ The least developed country Parties and small island developing States may submit the information referred to in Article 13, paras. 7–10, of the Paris Agreement at their discretion.

(c) Enhancing the data collection and management process through formalization and standardization, and exploring opportunities for synergies in the data collection process with existing reporting mandates and processes at the national level.

11. Despite the flexibility provisions enshrined in the Paris Agreement and detailed in the MPGs, many developing country Parties expect that considerable efforts will be required for the transition from the existing MRV arrangements to the ETF. For those Parties, the enhanced depth and scope of reporting under the ETF will pose a significant challenge in terms of the resources required to fulfil the new requirements.

12. At the same time, those Parties have acknowledged that their engagement in the existing MRV arrangements, including preparing and submitting NCs and BURs and participating in the ICA process, provides a solid basis for preparing for the implementation of the ETF. Their efforts to improve their NCs and BURs can facilitate such preparation not only for reporting in BTRs but also for participating in the technical expert review and the facilitative, multilateral consideration of progress.

13. In that context, Parties need a regular and reliable flow of information and data about their GHG trends and projections, the effects of their policies and measures, climate risks, opportunities and actions to reduce GHG emissions, and support needed and received for climate action. Such information supports evidence-based national decision-making and the timely submission of quality national reports under the Convention and the Paris Agreement. To compile and report this information on a biennial basis, or more frequently for other national needs, countries need appropriate institutional arrangements.

14. In addition, the transition from the implementation of the existing MRV arrangements to the implementation of the ETF will include enhanced scope and depth of reporting for developing country Parties, which underscores the importance of having strong sustainable institutional arrangements in place. A continuous process of improving, collecting, processing, analysing, compiling, reporting and reviewing data is likely to fully occupy a core team of national experts throughout the reporting cycles. This process will also require engagement with a broad range of stakeholders for collecting data and using outputs by decision makers.

15. The CGE successfully organized seven virtual regional hands-on training workshops in 2020, which included the participation of 296 national experts from 108 developing country Parties, on the existing MRV arrangements and the ETF. The aim of those training workshops was to enhance the technical capacity of the experts in implementing the existing MRV arrangements and understanding the MPGs for the ETF with a view to facilitating developing country Parties' preparation for and transition to the implementation of the ETF.

16. Taking into account the COVID-19 situation globally and its impacts, the CGE, at its 5th meeting, agreed to organize a series of virtual regional hands-on training workshops, as part of its workplan for 2021, on institutional arrangements for the existing MRV arrangements and the ETF, including data management for national GHG inventories, and to discuss key considerations for institutional arrangements to support the transition to the ETF.

B. Objective

17. With a view to addressing the issues identified in paragraphs 10–11 above, the main objective of the virtual regional hands-on training workshops was, by engaging participants in interactive discussions and exercises, to enhance the technical capacity of developing country Party experts to implement the existing MRV arrangements and understand the MPGs for the ETF so as to facilitate those Parties' preparation for the implementation of the ETF, complementing other CGE efforts in this regard.

18. Specifically, participants were expected to gain from the training workshops:

(a) A better understanding of the existing MRV arrangements and the ETF;

(b) Knowledge of the key components of institutional arrangements, including data management for national GHG inventories, in the context of the existing MRV arrangements and the transition to the ETF;

- (c) The ability to articulate the areas that are essential to setting up, sustaining and continually improving institutional and legal arrangements to support the existing MRV arrangements and the ETF, including data management for national GHG inventories;
- (d) Practical experience that can be built on or applied to establish or strengthen institutional arrangements;
- (e) The ability to identify gaps and capacity-building needs related to establishing and reporting on institutional arrangements for the transition to the ETF.

C. Structure

19. The training was conducted virtually using online tools that allowed participants to interact with one another via both video and chat functions throughout the workshops. Supplementary materials were provided by email or made available online. Training materials and presentations were made available to participants before the workshops (see paras. 22–23 below). Language interpretation services were provided for some of the workshops.

20. The training was aimed at experts who are actively involved in preparing NCs, BURs and national GHG inventories and in preparing for the implementation of the ETF, as well as experts from national statistics offices. The CGE strongly encouraged national focal points to take gender into account when nominating experts to participate in the training.

21. The training was structured in three phases – preparatory, training and follow-up – that spanned three weeks in each case. Each workshop was held over three days, with a three-hour virtual session each day.

1. Preparatory phase

22. During the preparatory phase, participants studied introductory materials, defined their expectations and familiarized themselves with the training exercise. Participants received a survey form on which they shared personal information including expertise, working areas and interests. They were invited to submit an initial set of questions on the workshop materials or on areas for which they sought clarification. The information received was synthesized and shared with the CGE resource persons.

23. Pre-recorded videos on the UNFCCC YouTube channels⁹ and materials on institutional arrangements were made available to participants. These included:

- (a) A short video on understanding the benefits of MRV;¹⁰
- (b) A short video on the existing MRV arrangements under the Convention for developing country Parties;¹¹
- (c) Four introductory videos on MRV and the ETF in Arabic, English, French, Russian and Spanish:¹²
 - (i) Introduction and overview of the ETF: an overview of the existing MRV arrangements and the ETF;
 - (ii) Reporting under the ETF: an overview of the reporting provisions under the ETF based on the MPGs and how the existing MRV arrangements can support the transition to the ETF;
 - (iii) Foundational elements of the MPGs: an overview of such elements, including the provisions on flexibility, institutional arrangements and continuous improvement of reporting;

⁹ <https://www.youtube.com/channel/UCuLEr-GWiwCBB6zBDX3eIQ> and <https://www.youtube.com/c/UnfcccInt>.

¹⁰ <https://www.youtube.com/watch?v=mHENbEig8yE>.

¹¹ <https://www.youtube.com/watch?v=XchAUP-I9F4>.

¹² <https://www.youtube.com/playlist?list=PLBcZ22cUY9RLLBHnq3xwvt1fq3qPqcxWb>.

(iv) Linkages – how the ETF supports the Paris Agreement: an overview of explicit linkages of the ETF with other elements of the Paris Agreement, such as NDCs, reporting on adaptation, the global stocktake and the Paris Agreement Implementation and Compliance Committee;

(d) The CGE toolbox on institutional arrangements, including a handbook, available in Arabic, English, French, Russian and Spanish, on institutional arrangements to support the MRV or transparency of climate action and support, a compilation of country experience and a compilation of references to other relevant technical resources.¹³

24. In addition, the CGE developed and made available a technical presentation¹⁴ that provides an overview of institutional arrangements, including data management, for transparency. The presentation introduces the institutional arrangements in the context of transparency; elaborates the key components and actions involved; showcases key elements to sustain institutional arrangements; and introduces a step-by-step guide to set up, adapt and report on institutional arrangements.

25. The CGE also prepared a hands-on exercise aimed at helping participants to familiarize themselves with the approaches and tools necessary to conduct stakeholder analysis and mapping to support the existing MRV arrangements and the ETF, and to prepare a stakeholder engagement plan to support the transparency arrangements. It also aimed at guiding Parties to identify their stakeholders, to analyse and map them according to their levels of interest and influence regarding the transparency arrangements, and to develop a stakeholder engagement plan to determine how best to involve and communicate with each stakeholder group.

2. Training phase

26. Over the course of three days, participants joined a virtual hands-on training workshop and had the opportunity to ask questions and seek clarification on the materials covered during the preparatory phase, discuss the key components and areas of institutional arrangements to support the existing MRV arrangements and the ETF, and engage in breakout group exercises to conduct an assessment of where their country stands and what their country needs to put in place to sustain and improve institutional arrangements, as applicable to its national circumstances. Participants also joined in discussions in a plenary setting on the breakout group exercises and shared their experience and lessons learned. The workshop agenda is provided in annex I.

27. The first day of the workshop included an opening remark by the Chair of the CGE, a recap of the preparatory phase and an interactive session that included live polls and a moderated in-depth discussion on organizational mandates for institutional arrangements. Participants shared their experience and lessons learned, including collaboration and coordination arrangements between experts and organizations, as well as legal frameworks.

28. On the second day, following a presentation on stakeholder engagement tools and techniques, participants engaged in interactive sessions that included live polls and moderated discussions on stakeholder analysis and mapping, and stakeholder engagement tools and approaches. During the discussions, participants shared examples, experience and lessons learned on their stakeholder analysis and consultation processes.

29. On the third day, following a presentation on institutional arrangements that included data management tools and techniques, participants again worked in breakout groups. The workshop was then closed by a CGE member.

3. Follow-up phase

30. After the virtual training, participants were encouraged to continue engaging with their peers and the CGE resource persons, either to address any technical questions they may

¹³ <https://unfccc.int/process-and-meetings/bodies/constituted-bodies/consultative-group-of-experts-cge/cge-toolbox-on-institutional-arrangements>.

¹⁴ Available at <https://unfccc.int/process/bodies/constituted-bodies/consultative-group-of-experts/calendar-of-meetings/archive-of-meetings>.

have or to share their experience, lessons learned or technical resources that may benefit their peers.

31. An online survey was circulated to participants to solicit feedback on the preparatory and training phases, training approach, and content, as well as on whether the training objectives and participants' individual expectations had been achieved. Results will be used to improve future training workshops.

III. Outcomes of discussions

A. Recap of the preparatory phase

32. During the preparatory phase, training materials were made available to participants that provided an overview of the existing MRV arrangements and the ETF, institutional arrangements and data management for transparency, and CGE toolbox on institutional arrangements. On the basis of the information provided, participants prepared for the next phase of the training by reflecting on their countries' existing institutional arrangements and how these could be enhanced for the implementation of the ETF.

33. During the recap of the preparatory phase, participants sought clarification on various aspects of the information provided in the materials. Some topics raised by the participants for clarification featured in most workshops, including the availability of technical and financial support for implementing the ETF and how to access it; the differences between the existing MRV arrangements and the ETF in detail; whether the ETF will replace the MRV process; the key potential benefits for countries of implementing the ETF; and how to establish robust institutional arrangements for implementing the ETF. The questions asked by participants in the pre-workshop surveys are provided in annex II.

B. Interactive information sessions

1. Organizational mandates for institutional arrangements

34. Most of the workshop participants indicated that, in their countries, MRV and ETF activities are coordinated by national environmental or climate change authorities. Other entities engaged in the MRV and the ETF processes include GHG units; ministries of agriculture, energy, finance, forestry, planning or transport; national statistics offices; private sector organizations; research institutions; and subnational agencies.

35. Institutional arrangements in many participating countries are informal. Regulatory tools in place for MRV and the ETF include climate change law, regulations, memorandums of understanding and voluntary agreements. While informal institutional arrangements are useful, sometimes they are not sufficient. A key challenge when developing institutional arrangements is to establish a legal framework that is both flexible and sufficiently comprehensive to cover all aspects of transparency, including data management, periodicity and coordination.

36. Almost half of the participants indicated that their countries have systems or arrangements in place for collecting and managing data for their national GHG inventory. A few have such arrangements in place for NDC tracking and reporting on adaptation, mitigation and support. When developing national GHG inventories, a key challenge is to collect relevant and reliable climate data from stakeholders.

37. Almost all participants shared the view that the roles and responsibilities of entities and data-sharing arrangements should be addressed by regulatory tools for MRV and the ETF. Most participants also considered QA/QC protocols, stakeholder engagement arrangements, data confidentiality provisions and timelines for preparing reports as necessary elements.

38. Some participants acknowledged the importance of international support for the enhancement of institutional arrangements and gave some examples of international support programmes.

2. Stakeholder engagement

39. Participants indicated that GHG inventory preparation and reporting on adaptation, mitigation and support are usually covered by different authorities in their countries. Participants highlighted that energy and environment authorities play vital roles across different aspects of MRV and the ETF, and financial authorities lead the reporting on support. Participants considered these entities as key stakeholders because they provide data and information, they possess technical expertise and provide support, they control resources and develop climate policies, and they have significant influence on other stakeholders. Participants indicated that having conflicting mandates across government entities is common. They noted that establishing robust national institutional arrangements is essential to build coherence and catalyse synergy between stakeholders. Any actor (public or private) involved in climate issues is a relevant stakeholder. The participants' inputs to the live polls showed:

(a) Top stakeholders for GHG inventory preparation as the ministries of agriculture, energy, environment, and forestry. Other stakeholders include the ministries of planning, industry, and transport, national statistics office, waste authority, etc.

(b) Top stakeholders for adaptation reporting as the ministries of agriculture and environment. Other stakeholders include the climate change office, ministries of health and planning, national statistics office, NGOs, water authority, etc.

(c) Top stakeholders for mitigation reporting as the ministries of energy and environment, and transport authority. Other stakeholders include the climate change office, forestry and waste authorities, ministries of agriculture, industry and planning, etc.

(d) Top stakeholders for reporting on support as the financial authorities, such as the ministry of finance or national treasury. Other stakeholders include intergovernmental organizations, ministries of environment, planning, and industry, NGOs, the private sector, local governments, etc.

40. During the discussions, participants highlighted challenges associated with data collection, including issues resulting from data confidentiality. In many regions, only a few countries have sufficient political interest or buy-in for MRV and ETF activities, while around half of the participants from Latin America and the Caribbean indicated their countries have sufficient political interest or buy-in. Some stakeholders were concerned that their business might be affected by sharing data for national GHG inventories. To promote buy-in, it is important to explain to data providers what data are needed, and why and how the data will be used. It is also necessary to convince data providers that they will not be put at a disadvantage from disclosing their data. One country shared its experience in overcoming the challenge related to sharing data. The country approached its fuel companies directly and discussed the obligations under the Convention and the Paris Agreement, and the fuel companies were much more open to sharing data after a few engagements. The country did not establish any formal agreements with the fuel companies but received a letter from them stating that the data would be presented at an aggregated level. A possible way to build trust to overcome the reluctance or misperceptions of some stakeholders is to establish protocols between institutions, especially for protecting confidential or sensitive data.

41. Participants mentioned there are differences in levels of commitment and/or engagement among stakeholders. Most participants indicated that they have a formal process to consult or engage with their stakeholders that enables them to involve, collaborate with, consult or inform stakeholders on MRV and ETF arrangements. The most commonly used tools are one-to-one and steering meetings, workshops and multi-stakeholder forums. Less commonly used tools are surveys, newsletters, websites and social media. Most participants indicated there are avenues to enhance stakeholders' understanding and awareness of MRV and ETF arrangements. However, participants also highlighted that it is challenging to engage stakeholders. Stakeholders usually have limited time and staff resources available for working on MRV matters. Closer engagement with stakeholders helps to gain their attention and time.

42. Participants suggested that when engaging stakeholders in data collection and reporting, it is important to consider the value added to their work. For example, one country

shared that their climate change unit worked with the ministry of agriculture, which had an existing data collection platform but had no capacity to run it effectively. The climate change unit helped the ministry to enhance its capacity, and the ministry allowed the unit to use some of the data for climate change reporting purposes.

43. Participants reported that national statistics offices are key partners and are often involved in MRV and ETF activities. Their mission is to regularly collect data from various stakeholders, and their work must be capitalized. In the absence of formal links between GHG inventory experts and national statistics offices, requests and needs should be expressed so they can add these components to their periodic data collection system. This would not only simplify data collection for national GHG inventories but also improve the quality of the data, which would be official, processed and standardized.

44. In general, participants considered that stakeholders, including public entities, the private sector, academia, media, NGOs and the public at large, have a limited level of technical knowledge on MRV and the ETF. Public entities, academia and NGOs in some countries have varying depths of technical knowledge on MRV and the ETF. The objectives and outputs of the MRV and ETF transparency arrangements may not have been articulated to stakeholders in these countries. In other countries, public entities have an advanced level of relevant knowledge, and academia and NGOs have some relevant knowledge. Participants also mentioned capacity challenges caused by high staff turnover. Some countries have made efforts to raise stakeholders' awareness and build their capacity. For example, some countries are integrating climate change into the education curriculum. One country shared its experience of involving key stakeholders in various training events, such as the CGE training workshops.

45. An option presented in the discussions was to consider moving to a broader approach and considering the Sustainable Development Goals as a whole. Around half of the participants indicated that monitoring of the Sustainable Development Goals was already integrated into or considered during MRV and ETF activities.

46. Some other challenges raised by participants were:

(a) Differences in terminology used by governments and other stakeholders, which create challenges in communication;

(b) The time needed to institutionalize reporting owing to issues such as the complexity of provisions on reporting and the extensive coordination needed to access and collate data from stakeholders;

(c) Financial issues and changes in government, which often result in changes in priorities;

(d) The need for a harmonized and digitized climate data system that will help in moving from MRV to the ETF, in countries with digital gaps.

C. Breakout group work

47. Following a presentation on institutional arrangements, including data management tools and techniques and a briefing on the objective of and approach to be taken by the breakout groups in the hands-on exercise, participants were assigned to their groups. In each group, a pre-selected case owner presented the details of its institutional arrangements, including current data management arrangements for the national GHG inventory and the gaps in its design needs. Group participants provided their reflections on the case study and suggestions on how to address the gaps. The case owner reflected on the suggestions, including potential next steps that could help to address the issue. Following this exercise, each group reported back on its key findings, which initiated discussions, followed by a question and answer session.

48. The groups were formed, where possible, on the basis of participants' interests indicated in a pre-workshop survey. CGE members and resource persons acted as facilitators. The case owners (participants who volunteered to share their country's experience) presented their case to the relevant breakout group, which discussed the case and completed the

required tasks. Nominated rapporteurs reported back on the outcomes of the discussions that took place in their respective breakout groups.

49. Some of the challenges and constraints shared by the case owners were common across countries. Suggestions and potential solutions could be valuable for other countries as well. Some of the challenges and constraints were highlighted by participants repeatedly under different discussions, such as lack of legal frameworks, lack of capacity and resources, challenges in collecting data from the private sector, data confidentiality, high employee and focal point turnover, and challenges in coordinating stakeholders.

1. Data collection and management system

50. Case owners introduced their countries' data collection and management systems and shared the constraints and challenges their countries were facing. Examples of the constraints and challenges presented include the following:

- (a) Lack of legal framework to guide data collection and management and guarantee a stable flow of data from stakeholders;
- (b) Challenges in data collection and coordination among different stakeholders and the absence of policies or legal arrangements for data sharing, such as hesitancy among data sources in the private sector to share their data;
- (c) Lack of a centralized information system for archiving, backing up and sharing data for sustainable GHG inventory management, as well as lack of appropriate hardware and software for developing and improving data management systems for the preparation of NCs;
- (d) Lack of capacity and resources, and need for support and assistance in many areas, including capacity-building, system development and maintenance, data analysis and data security, and new reporting format adoption;
- (e) Lack of access to financial and technical support;
- (f) Lack of systems for building the capacity of various stakeholders;
- (g) Lack of permanent institutional arrangements for the preparation of NCs, BURs and national inventory reports.

51. Participants discussed the cases, provided their reflections and suggestions and proposed possible solutions. For example, data collection exercises could be facilitated through a high-level mission letter when dealing with public institutions. To sensitize stakeholders to their roles and responsibilities, it should be made clear to them what data is needed, for what purpose the data is collected and how it will be used. With regard to the private sector, establishing incentives could be a solution. In one country, agreements were signed with private actors and endorsed by the ministry of environment and the prime minister's office. These agreements included incentives (equipment, computers and even remuneration). The sectoral focal points had their own data entry interfaces with pre-established format and reporting frequencies. After the QA/QC process, the data were made available to the public. Establishing a legal framework that normalized and standardized reporting, including a system of sanctions for reluctant actors, was a key component of one comprehensive national transparency system. For data management, the establishment of a government-housed data centre, with pre-established protocols and procedures for digitized data management, was considered key. Regular maintenance of the data management systems was necessary. Step-by-step improvement was also important. Some countries used project-based approaches as starting points to establish their MRV systems.

2. Quality assurance/quality control procedures

52. Case owners introduced their countries' QA/QC procedures and highlighted the following key challenges and constraints:

- (a) Unclear roles and responsibilities of stakeholders for the QA/QC process, as well as lack of a formal collaboration structure among key stakeholders;
- (b) Lack of regulatory tools to ensure adequate QA/QC procedures;

- (c) Lack of alternative data for QA;
- (d) Lack of reliable measurement of activity data for key IPCC categories;
- (e) Discrepancies among data supplied by different stakeholders, and inconsistent feedback from experts who participated in stakeholder data validation workshops;
- (f) Limited human resources and high employee and focal point turnover in the data-providing entities;
- (g) Complexity and changes in the governance of institutions;
- (h) Lack of capacity-building programmes solely focused on the development and implementation of QA/QC procedures.

53. Participants highlighted capacity-building needs in QA/QC procedures. In that context, involving national research institutes and universities was considered key. At the international level, experts from the IPCC or the Global Support Programme for Preparation of National Communications and Biennial Update Reports by non-Annex I Parties could also provide capacity-building and training. The roles and responsibilities of stakeholders should be mapped. Data-providing entities should nominate focal points. Possible solutions to address the above-mentioned constraints and challenges also included developing a consistency checklist for QA/QC procedures and establishing formal agreements with data providers.

3. Data availability

54. Case owners shared their countries' experience in collecting data and the key challenges and constraints they were facing. These include:

- (a) Poor institutional arrangements for data collection, such as lack of legal arrangements on reporting climate data, unclear roles and responsibilities with regard to the provision of data, and limited institutional commitment;
- (b) Lack of technical capacity and experience in collecting, interpreting and analysing data, such as lack of data collection procedures and guidance for data providers, no information technology tools to collect or receive official data from various stakeholders, the format of data not being user-friendly, and lack of monitoring and reporting indicators;
- (c) Lack of practical data collection coordination among stakeholders, such as no formal stakeholder engagement process, plan or protocols to communicate data needs and uses, and the template of the data collection process developed for data collection from different stakeholders not functioning well;
- (d) Lack of resources, including trained staff, funds, training and data collection materials. Although training is available, sometimes it is difficult to practice the suggestions from training in practice;
- (e) Meeting constraints caused by COVID-19;
- (f) Lack of awareness of data collection among stakeholders;
- (g) Data collection taking place on an ad hoc basis, and data being collected in formats that are not necessarily appropriate for the national GHG inventory, which also causes irregular data flow;
- (h) High staff and focal point turnover within key data-providing institutions;
- (i) Lack of or no data for some subcategories, such as medical waste.

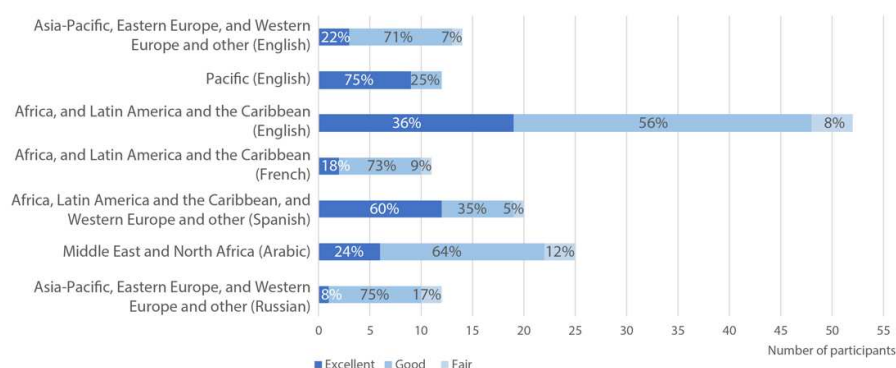
55. Participants' reflections indicated that some private sector and other partners did have data to share. However, without a legislative framework in place, the issue of a lack of data will continue to exist. Another potential way to increase data availability is to ensure high-level support. Adequate approaches and tools should be identified. Data formats need to be defined and shared with relevant data providers.

IV. Conclusions

56. After each round of the training, a survey was conducted to obtain feedback from participants. Respondents were asked to rate the workshop overall as excellent, good, fair or poor. Figure 1 indicates that most of the respondents rated the workshop as either excellent or good.

Figure 1

Participant ratings of the Consultative Group of Experts virtual regional hands-on training workshops conducted in 2021



57. Participants confirmed that the workshops were well structured and organized. They could access the training materials easily or very easily. Training sessions were well presented and facilitated, and participants' questions were addressed. Participants expressed the view that the training had enhanced their understanding of institutional arrangements to facilitate the implementation of the existing MRV arrangements under the Convention and prepare for the implementation of the ETF. Some participants expressed the view that this new knowledge would help them to enhance institutional arrangements, promote stakeholder engagement, improve the data collection process, develop climate change laws and legal frameworks, and complete other related work in their countries. Some participants also indicated that this would help them to train their colleagues and build the capacity of other stakeholders.

58. While recognizing the constraints caused by COVID-19, participants shared that in-person workshops would be more productive than virtual ones. This sentiment seems to be related to the challenges experienced by participants during the virtual training, including in relation to Internet connectivity, access to the online platform, the accommodation of different time zones and the limited opportunity to engage with other workshop participants.

59. Most participants were satisfied or very satisfied with the virtual format. They recognized the opportunities provided by virtual training events to complement in-person workshops, as more people can attend virtual training workshops, and noted that the virtual training was a suitable format during the COVID-19 pandemic.

60. Most participants indicated that sufficient time was allocated for each training session, while some participants suggested extending the duration of virtual training sessions.

61. Survey respondents suggested repeating the virtual training workshops and engaging with a broader range of country experts and relevant stakeholders. Some participants expressed an interest in future workshops to be organized by the CGE. They also suggested the following specific actions to enhance the effectiveness of such workshops in the future:

- (a) Allocating additional experts to breakout groups to enrich the discussions, as most of the countries were still very new to the topics; and including more exercises and discussion feedback;
- (b) Establishing a mechanism to ensure the active engagement of all participants;
- (c) Sharing additional materials, including all the presentations, before the respective training session to enrich discussions;

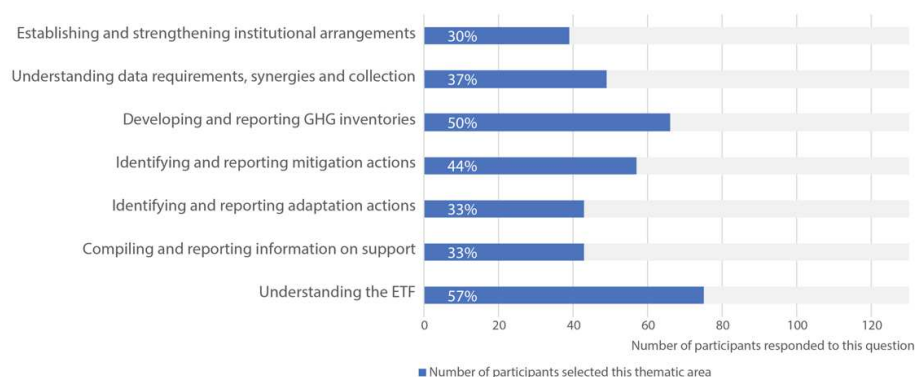
(d) Providing one-to-one training workshops to countries, including to representatives of all stakeholders;

(e) Minimizing wide-ranging geographical participation to accommodate different time zones more effectively.

62. The survey respondents indicated they would like to learn more about the following components of MRV and ETF from their country's perspective in future workshops: establishing and strengthening institutional arrangements, understanding data requirements, synergies and collection, developing and reporting GHG inventories, identifying and reporting mitigation actions, identifying and reporting adaptation actions, compiling and reporting information on support, understanding the ETF (including MPGs for tracking progress of implementation and achievement of NDCs), among others. The CGE received 131 responses to this question, which are mapped in figure 2. Other suggested topic areas are the achievement of NDCs, reporting format/table, ETF-related sectoral training, QA/QC, etc.

Figure 2

MRV and ETF thematic areas participants would like to learn more about



63. The CGE extended its appreciation to all resource persons from the regional collaboration centres who assisted with the training.

64. The CGE thanked Parties that contributed financial resources to support its work, including for organizing the virtual regional hands-on training workshops.

Annex I

Generic agenda for the virtual regional hands-on training workshops

Day 1 – Interactive discussions on **organizational mandates** (about two hours)

- (a) Opening, objectives of the virtual training workshop, engagement rules (netiquette), tour de table (15 minutes)
- (b) Recap of the preparatory phase and question and answer session (30 minutes)
- (c) 10-minute break
- (d) Interactive discussion session on organizational mandates (maximum 60 minutes): *{During this session, discussions will be facilitated by a set of basic questions on organizational mandates for institutional arrangements through live polling tools such as Mentimeter. Then participants will be invited to share examples, experience and lessons learned, including on collaboration and coordination arrangements between experts and organizations, as well as legal frameworks (laws, agreements, contracts, etc.).}*
 - (1) Live polls on organizational mandates, including legal frameworks
 - (2) Moderated discussion to highlight examples, experience and lessons learned
- (e) Introduction of day 2 agenda (10 minutes)

Day 2 – Interactive discussions on **stakeholder engagement** (about three hours)

- (f) Opening and welcome remarks (5 minutes)
- (g) Presentation: Introduction to stakeholder engagement tools and techniques (20 minutes)
- (h) Plenary discussion and breakout groups, guided by instant live polling on stakeholder engagement (60 minutes) *{During this session, the discussions will be facilitated by a set of short questions on stakeholder engagement presented through live polling tools such as Mentimeter. Then participants will be invited to share examples, experience and lessons learned on their stakeholder engagement and consultation processes.}*
- (i) 10-minute break
- (j) Plenary discussion and breakout groups, guided by mini exercises on stakeholder engagement (60 minutes) *{During this session, discussions will be facilitated by a set of basic questions on stakeholder engagement presented through live polling tools such as Mentimeter. Then participants will be guided to work on mini exercises to conduct stakeholder analysis and mapping.}*
- (k) Introduction of day 3 agenda (10 minutes)

Day 3 – Breakout group work on **institutional arrangements, including data management for national GHG inventories** (about three hours):

- (l) Opening and welcome remarks (5 minutes)
- (m) Presentation: Introduction to institutional arrangements, including data management tools and techniques (15 minutes)
- (n) Introduction to breakout group exercise (10 minutes)
- (o) Clinic session in parallel breakout groups (60 minutes):

Participants, in breakout groups, are requested to work and brainstorm on a case study where:

- a. A pre-selected case owner will present the details of its institutional arrangements, including current data management arrangements for the national GHG inventory and gaps within its design needs
 - b. Breakout group participants will provide their reflections on the case study and suggestions on how the gaps may be addressed
 - c. The case owner will provide reflections on the suggestions, including potential next steps that could help to address the issue
- (p) 10-minute break
- (q) Breakout group presentations on the outcomes and key findings of the clinic exercise (maximum 60 minutes)
- (r) Question and answer session (20 minutes)
- (s) Feedback on the workshop and discussion on expectations (10 minutes) *{An online survey will be circulated to participants to collect feedback on the virtual training. Among other things, participants will be invited to provide suggestions and recommendations on future improvements and training needs.}*
- (t) Closing (10 minutes)

Annex II

Questions collected from the participants through pre-workshop surveys

I. General and cross-cutting matters

- What are ETF, data collection and management system, and NDC implementation?
- Will ETF replace the MRV process?
- What is the stepwise approach to establishing an MRV?
- How to overcome budget constraints to implement MRV/ETF? What are the technical support and funding opportunities for countries to plan and establish the MRV system?
- What are flexibilities for countries with special circumstances with limited access to international supports?
- What would be the most challenging issue regarding ETF and MRV for developing countries?
- How are the varying NDCs of Paris Agreement Parties to be aggregated in the global stocktake?
- How to develop climate change mitigation and adaptation projects and what are the existing mechanisms for accessing finance support for their implementation?

II. Institutional arrangements

- What is the importance of putting institutional arrangements in place? How to reflect the country condition in an institutional mechanism?
- Is there a generic institutional arrangement to adopt? What would be the process of institutional arrangements regarding MRV?
- What are the challenges in dealing with the capacity-building across institutional arrangements – as a way of getting cooperation from stakeholders for reporting?
- How far have reports on institutional arrangements shaped negotiations, or how has this information been useful in discussions on support delivery and issuance of guidelines?
- How to handle the complex processes surrounding data access procedures and protocols?
- How to sustainably maintain an institutional arrangement when the focal points of each structure change (staff mobility)?

III. Stakeholder engagement

- What are stakeholders in a GHG inventory process? How to proceed with the analysis of these stakeholders?
- How to ensure an effective engagement of all stakeholders in the MRV system?
- Who are the necessary experts for the transparency system? From which government departments, agencies, academic institutions, private companies do they come?

- How do experts from NGOs contribute to the transparency system? Is regular interaction facilitated?
- Are there any obstacles to mobilization? How can government agencies enhance and retain in-house experts? How can they administer/direct/advise managed consultants?
- What are the roles of national statistics offices, departments/agencies in the MRV/ETF systems? Is there an overlap between the data collection activities of each department?

IV. Measurement, reporting and verification template, data collection and data management

- How to set up a data template to collect the data necessary to be able to measure the emission level for energy, transportation and waste sectors?
- How to interrupt the data and show the emissions level based on the countries' current MRV template?
- How to legalize data sharing between ministries?
- Would it be best practice if implemented a cloud-based data collection and manipulating system for national GHG inventories?
- In many developing countries, some database software is not readily available. How to address this challenge?
- How to facilitate data collection for private sector actors?
- How to build trust for data sharing? How to build "complete" sharing protocols (quality and consistency)?
- How to develop a fluid, rich exchange framework within which reliable data circulates in the long term?

V. Reporting and inventory

- How the current reporting will be merged/migrated to the new requirements?
- What will be the reporting requirements on REDD+?
- What are some practical issues concerning MRV and emissions trading schemes from the national inventory side?
- How to create awareness within national institutions that are responsible for inventorying climate change mitigation data that contribute to reducing GHG emissions?
- What are the methodologies for establishing an MRV system in each sector (i.e. industry and agriculture, forestry and other land-use sectors)?
- Regarding the uncertainty analysis, could CGE share the experience to minimize the uncertainty?

VI. Experience sharing and capacity-building

- Where to find country experiences in setting up their MRV systems? Please share some experiences in institutional arrangement and MRV in countries with complex and modular administrative structures.
- Is there any database on which MRV/ETF expert links of other countries?
- Where to find study cases from different countries/regions, to develop exchange learning between participants?

- What are the opportunities for country capacity-building on specific aspects of MRV?
 - Are there knowledge management and training resources dedicated to archiving information and documenting processes to ensure that the work builds on existing efforts and facilitates the work of future staff?
-