

Annotated Outline

for Chapter II of the Biennial Transparency Report

Information Necessary to Track Progress Made in
Implementing and Achieving Nationally Determined
Contributions under Article 4 of the Paris Agreement

Introduction to the Annotated Outline

Under the Paris Agreement, countries that are Parties to the Agreement are committed to preparing a biennial transparency report (BTR) on their progress on climate action. A BTR will provide information on greenhouse gas (GHG) emissions and trends; information necessary to track progress made in implementing and achieving nationally determined contributions (NDCs); information on adaptation to climate impacts; information on support provided, mobilized, received and still needed; and describe areas for improving reporting in the future. In reporting on climate action, a BTR must describe a Party's NDC, including any updates, to enhance understanding of each country's long-term goals for GHG reductions. A BTR must also describe the indicator(s) used to track progress in implementing and achieving the NDC. This is critical in allowing domestic stakeholders, other Parties, and the international community to understand progress made toward meeting a Party's NDC.

The Annex to Decision 18/CMA.1 provides the modalities, procedures, and guidelines (MPG) for the transparency reporting framework for action and support referred to in Article 13 of the Paris Agreement. In general, a BTR will include several chapters, and within each chapter are sections which group information provided by the appropriate MPG provisions. This document provides an annotated outline for Chapter II of the BTR, Information Necessary to Track Progress Made in Implementing and Achieving Nationally Determined Contributions under Article 4 of the Paris Agreement.

In addition to this annotated outline for BTR Chapter II, several crosscutting resources are available to help with preparation of a BTR, including:

- **Reference Manual for the Enhanced Transparency Framework under the Paris Agreement (“ETF Reference Manual”), Version 2 (2022)**
 - Published by the UNFCCC secretariat, the ETF Reference Manual serves as a tool for clarifying the requirements related to the reporting and review of information included in the BTR and the relevance of that information to Parties' implementation of the Paris Agreement
 - Available at <https://unfccc.int/sites/default/files/resource/v2 ETFReferencemanual.pdf>
- **Technical Handbook for Developing Countries on Preparing for Implementation of the Enhanced Transparency Framework under the Paris Agreement (“ETF Handbook”), 2nd Edition (2023)**
 - Developed by the Consultative Group of Experts (CGE) with the support of the UNFCCC secretariat, the Technical Handbook aims to improve awareness and understanding of the ETF and its MPGs by national experts and practitioners from developing countries.
 - Available at <https://unfccc.int/sites/default/files/resource/ETF%20Handbook-Edt2 EN.pdf>
- **UNFCCC BTR Expert Reviewer Training Courses**
 - While created for as mandatory training for experts who plan to serve as technical expert reviewers of BTR submissions, the [UNFCCC training programme materials](#) provide an excellent resource for plain language explanations of the MPGs and what technical expert reviewers will be looking for in the course of their reviews.
 - Course material can be downloaded as a PDF document; available at <https://unfccc.int/process-and-meetings/transparency-and-reporting/training-programmes-for-expert-reviewers#PA-review-training-programme> (scroll to the bottom of the page for access to course material).

- **NDC Partnership Climate Toolbox**

- Draws together tools, guidance, platforms, and support from leading institutions in a searchable database to help countries plan and implement their NDCs.
- Available at <https://ndcpartnership.org/knowledge-portal/climate-toolbox>

Table 1 lists the BTR chapters, the related MPG provisions for each chapter, and chapter-specific topical resources for BTR preparation.

Table 1. Available Resources or Support by BTR Chapter

BTR Chapter		Associated MPGs (paras.)	Resources/Support
I	National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases ^a	17–58	U.S. EPA’s Toolkit for Building National GHG Inventory Systems provide comprehensive templates that help and entity form a sustainable inventory system. The Capacity-building Initiative for Transparency—Global Support Programme (CBIT-GSP) prepared an annotated outline similar to this document to facilitate organizing and preparing the national inventory document (NID). While the current draft guidance is in Spanish, an English version will be available in 2025. UNFCCC training programme for expert reviewers under the Paris Agreement, Course B, Technical review of national inventories reports of anthropogenic emissions by source and removals by sinks of GHG.
II	Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement	59–103	UNFCCC NDC Registry provides access to Party NDCs, which provides useful examples of Party-chosen indicators for tracking progress. BTR Submissions provides access to Party BTRs, which include useful examples of Party reporting for different types of NDCs, as well as Technical Expert Review Reports. UNFCCC training programme for expert reviewers under the Paris Agreement, Course C, Technical review of information necessary to track progress made in implementing and achieving NDCs. Partnership on Transparency in the Paris Agreement (PATPA) provides Projections of Greenhouse Gas Emissions and Removals: An Introductory Guide for Practitioners.
III	Information related to climate change impacts and adaptation under Article 7 of the Paris Agreement	104–117	CBIT-GSP: Reporting adaptation through the biennial transparency report: A practical explanation of the guidance

BTR Chapter	Associated MPGs (paras.)	Resources/Support
IV Information on financial, technology development and transfer and capacity building support <u>provided and mobilized</u> under Articles 9–11 of the Paris Agreement	118–129	UNFCCC training programme for expert reviewers under the Paris Agreement, Course D, Technical review of the information on financial, technology development and transfer and capacity building support provided to developing countries
V Information on financial, technology development and transfer and capacity building support <u>needed and received</u> under Articles 9–11 of the Paris Agreement	130–145	UNFCCC training programme for expert reviewers under the Paris Agreement, Course D, Technical review of the information on financial, technology development and transfer and capacity building support provided to developing countries UNFCCC ETF Handbook —for example, Figure 13 (Information to be reported on financial support needed and received) on page 41 through Figure 17 (Information to be reported on capacity-building support received) on page 43.

a—The National Inventory Report (NIR) consists of the National Inventory Document (NID) and the Common Reporting Tables (CRT). The NIR may be submitted as a stand-alone report (NID and accompanying CRT), or as a component of a BTR (e.g., as a chapter within a Party’s BTR textual report accompanied by CRT).

Purpose of This Annotated Outline

This annotated outline is intended to assist in preparing and organizing BTR elements, specifically within Chapter II, and includes the following elements:

- Describing a Party's NDC, including updates;
- Information necessary to track progress made in implementing and achieving a Party's NDC under Article 4 of the Paris Agreement;
- Mitigation policies and measures (PAMs), actions and plans, related to implementing and achieving a Party's NDC under Article 4 of the Paris Agreement;
- Summary of greenhouse gas emissions and removals; and
- Projections of greenhouse gas emissions and removals.

The aim of this annotated outline is to assist in organizing information in BTR Chapter II so that it adheres to the MPG reporting provisions and presents a consistent and helpful narrative to describe a Party's current NDC, tracking progress in the implementation and achievement of the NDC, PAMs implemented to achieve the NDC, and projections of GHG emissions and removals. While reporting information in tabular formats is required through the use of the common tabular format (CTF) reporting tables, these CTF tables are not required to be presented within the narrative report. However, information from the CTF tables may complement and support the descriptive narrative information reported in Chapter II. Where relevant, this annotated outline describes where the inclusion of tabular information in the body of the narrative report, while not required, may help a Party describe its progress in a transparent, compelling, and easily understood manner.

This annotated outline is consistent with the example outline adopted by the CMA ([Annex IV](#) to decision 18/CMA.1). It includes references to the MPGs, CTFs, guidance from BTR drafters, "real world examples", tabular examples to support the narrative, and additional resources. The following appendices are also included to provide additional context or information for the descriptions within the annotated outline:

- Appendix A: MPGs Referenced
- Appendix B: Flexibility for Developing Countries that Need it in the Light of their Capacities
- Appendix C: Optional Organization for Projections Information in for BTR Section II.F
- Appendix D: List of Abbreviations, Acronyms, and Chemical Formulae

This annotated outline is *not* a replacement for the reporting guidelines outlined in the MPGs provided in the Decision 18/CMA.1 and 5/CMA.3 and their Annexes.

How to Use This Annotated Outline

The following is a guide to using the annotated outline, including an overview of how the annotated outline is organized, and a description of graphical elements to aid the user. When using the annotated outline, assume all MPG provisions are mandatory, unless otherwise stated.

1. Format of Each Section and Subsection

Each section and subsection in the annotated outline follow the same format. The example shown below distinguishes the different informational elements presented within the annotated outline.

II.[letter A, B, C...]. Section Title

MPG

All MPG paragraphs presented within each section, per Decision 18/CMA.1

General guidance is provided in dark blue within each section.

[Roman numeral i, ii, iii...]. Recommended Subsection Title¹

MPG

Only the applicable MPG paragraphs/provision for each subsection

General guidance is provided in dark blue within each subsection.

Examples

These example boxes include:

- Example narrative text (*presented in blue italic text*). In some cases this example text provides an indication in **gold bracketed text** that the Party should update a description or text with appropriate country-specific information
- Tables or graphics that could be used to supplement the narrative
- “Real world” guidance on how to draft language or the focus of the section or subsection
- *Italicized dark blue text* marking verbatim quotes from the provided reference



Tips

Helpful tips, guidance for BTR drafters, or additional resources are included in shaded text boxes with a lightbulb icon throughout the annotated outline. These tips may also point to examples of other types of documents a Party may have already drafted that might include applicable information that can be used in the BTR to streamline the drafting process.

¹ Note that a Party may rearrange or combine subsections if it makes more sense for its national circumstances or the NDC and helps present the relevant information in a transparent manner.

2. Graphical Icons

The following graphical icons are used to highlight additional boxes that contain information in the annotated outline.



CTF Table

This icon references the accompanying CTF table, as documented in Decision 5/CMA.3 Annex II. The CTF must accompany the textual BTR report. Note that while the CTF table format may be useful to organize the information to be reported, this format is not required to be included within the narrative (textual report portion) of the BTR.

In one section of this annotated outline, the CTF icon refers to a common reporting table (CRT) table for GHG inventory information. A CRT resource is provided within that section.



MPG Provision That “Encourages” Reporting or Indicates an Element “May” Be Reported

This icon indicates where a reporting provision in the MPGs provision is optional. The “+” symbol is used in this annotated outline where the MPG text indicates that reporting under a provision is “encouraged” or indicates that a Party “may” report something at their discretion. The “+” symbol is not present where the MPG text indicates that something “shall” or “should” be reported.

Appendix A of this annotated outline provides the MPG text, organized by MPG paragraph number. Note that for both certain “shall” and “should” provisions in the MPGs, flexibility provisions may apply for developing countries that need it in the light of their capacities.



Flexibility Provision

This icon indicates that a flexibility provision available to developing country Parties in the MPGs is discussed within the annotated outline subsection. See Appendix B of this annotated outline for more details on flexibility provisions available to developing country Parties in the MPGs.

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II. Information necessary to track progress made in implementing and achieving national determined contributions under Article 4 of the Paris Agreement

For the following sections and subsections in Chapter II, assume the information to be reported is mandatory, unless otherwise stated.

Before beginning to describe the Party's country-specific information, it may be beneficial to provide a summary or brief introduction of Chapter II highlights here in the upfront text of the chapter. This is not required within the MPGs but does provide context for the elements included in Chapter II.

Example text of a brief introduction

This chapter describes [the Party's] NDC in line with Article 4 of the Paris Agreement and provides information necessary to track progress made in implementing and achieving the NDC, including information on chosen indicator(s) for tracking progress and a description of policies and measures (PAMs) that are being implemented to achieve the NDC. This chapter also summarizes [the Party's] overall GHG emissions and removals and trends and includes associated projections of GHG emissions and removals with currently implemented and adopted mitigation measures.

II.A. National circumstances and institutional arrangements

MPG

Covers para. 59 through 63

This section describes national circumstances, institutional arrangements, and other arrangements in place for tracking progress made in implementing and achieving the NDC.



Tips

Per MPG para. 63, a Party may reference previously reported information as needed to fulfill this section (e.g., a previous national communication). Ensure the reporting elements in each subsection are included.

i. National circumstances

a. Description of national circumstances

MPG

Para. 59

Include the following information to describe national circumstances and context for other information reported across the BTR. The minimum information to provide is:

- Government structure
- Population profile
- Geographical profile
- Economic profile
- Climate profile
- Sector details

Example description of national circumstances—subsection organization

It may be easiest to structure the narrative using each of the mandatory reporting elements (e.g., government structure, population profile, etc.) as a sub-header within this subsection.

The first example is an excerpt from Chapter 1 of Guyana's first BTR (BTR1), which combines both national circumstances and institutional arrangements.

Chapter 1—National Circumstances and Institutional Arrangements

1. *Administrative Structure*
2. *Geography and Topography*
3. *Hydrological Resources*
 - a. *Coastal Artesian Basin and Aquifers*
 - b. *Rivers*
 - c. *Watersheds*
 - d. *Lakes and Conservancies*
 - e. *Wetlands*
 - f. *Groundwater Resources*
4. *Natural Resources*
 - a. *Minerals*
 - b. *Forests*
 - c. *Arable Land and Agriculture*
 - d. *Fisheries*
 - e. *Water*
 - f. *Biodiversity and Protected Areas*
5. *Climate Profile*
 - a. *Climate Change Trends*
 - b. *Climate Impacts and Vulnerabilities*
6. *Socioeconomic Profile*
 - a. *Economy*
 - b. *Population and Demographics*
 - c. *Infrastructure*
7. *Energy*
 - a. *Current Energy Usage*
 - b. *Planned Energy Transition*
8. *Tourism*
9. *Climate Change Policy and Institutional Framework*
 - a. *International Environmental Agreements*
 - b. *Department of Environment and Climate Change*
 - c. *National Constitution of Guyana*
 - d. *Environmental Protection Act*
 - e. *Protected Areas Act*
 - f. *Wildlife Conservation and Management Act*
10. *National Plans/Policies/Strategies*
 - a. *Mainstreaming Rio Convention Implementation*
 - b. *Development Priorities and Objectives*
 - c. *Agriculture Sector*
 - d. *Forestry Sector*
 - e. *Energy Sector*
 - f. *Climate Change*

Source: Chapter 1. National Circumstances and Institutional Arrangements, 2024. *Guyana: First Biennial Transparency Report to the United Nations Framework Convention on Climate Change*. Available at: https://unfccc.int/sites/default/files/resource/Guyana_First%20Biennial%20Transparency%20Report_February%202024%20-%20Final.pdf

As another example, below is the organization for Chapter 3 in the United States of America's BTR1. The differences from the previous example highlight the discretion Parties have in deciding how to present the required information, as long as it is done so clearly and transparently:

Chapter 3: Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement

A. National Circumstances and Institutional Arrangements

1. *Government Structure*
 - a) *Federal Government*
 - (1) *Executive Branch*
 - (2) *Legislative Branch*
 - (3) *Judicial Branch*
 - b) *Subnational Actors*
2. *Population Profile*
3. *Geographic Profile*
4. *Economic Profile*
5. *Climate Profile*

Source: 2024 U.S. Biennial Transparency Report: First Biennial Transparency Report of the United States of America. Available at: <https://unfccc.int/sites/default/files/resource/2024%20U.S.%20Biennial%20Transparency%20Report.pdf>

Example description of national circumstances—narrative text with figures

Within each of these subsections, figures are presented to support the narrative and provide more context for the stated information. For example, the following presents a description with accompanying figure describing the government structure (one element of the national circumstances) for Zimbabwe:

“Zimbabwe has ten administrative provinces namely Bulawayo, Harare, Manicaland, Mashonaland East, Mashonaland Central, Mashonaland West, Masvingo, Matabeleland North, Matabeleland South, and Midlands. These provinces are further divided into sixty administrative districts. Bulawayo and Harare are metropolitan provinces while the remaining eight provinces are mostly rural and intermingled with a few towns and growth centres (Figure 0.1). Zimbabwe has embraced a devolution of powers in its governance system in which power has been transferred from central government to local government, as enshrined in the Zimbabwe Constitution. This devolution of powers provides a strong foundation for local government to respond to climate change through a consultative, fully participatory, and transparent process that leaves no-one and no place behind, a central principle of the Sustainable Development Goals.”

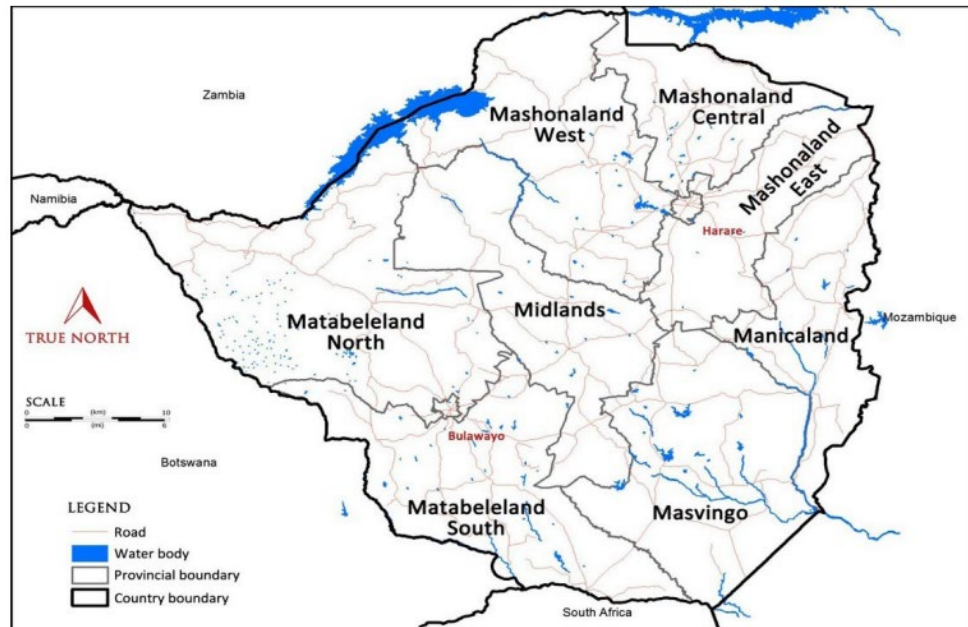


Figure 0.1: Provincial Boundaries of Zimbabwe

Source: Figure 0.1. Zimbabwe's First Biennial Transparency and Fifth National Communication Report to the United Nations Framework Convention on Climate Change (2024). Available at: <https://unfccc.int/sites/default/files/resource/ZIMBABWE%E2%80%99S%20FIRST%20BIENNIAL%20TRANSPARENCY%20AND%20FIFTH%20NATIONAL%20COMMUNICATION%20REPORT%20TO%20THE%20UNITED%20NATIONS%20FRAMEWORK%20CONVENTION%20ON%20CLIMATE%20CHANGE.pdf>



Tips

Consider the Party's most recent national communication or biennial update report (BUR). The description of national circumstances may already be cited or reported there.

b. Description of how national circumstances affect GHG emissions and removals

MPG

This subsection provides a descriptive summary of how the Party's national circumstances impact GHG emissions and removals over time.

Para. 60

Examples of a potential impact

Here, the Party describes the national circumstances that limit its application of alternative energy:

"Singapore has limited land area, relatively flat land, a high urban density, low wind speeds (2–3m/s), and lacks near-surface geothermal resources and major river systems. Therefore harnessing alternative energy sources such as hydroelectricity, marine, wind, geothermal or conventional nuclear power is a major challenge. Whilst solar energy is Singapore's most viable domestic renewable energy option, competing uses for land greatly limit our access to solar energy at scale. Such difficulties in transitioning to alternative energy are recognised by the UNFCCC, under Articles 4.8 and 4.10. Nonetheless, we will continue to pursue available opportunities."

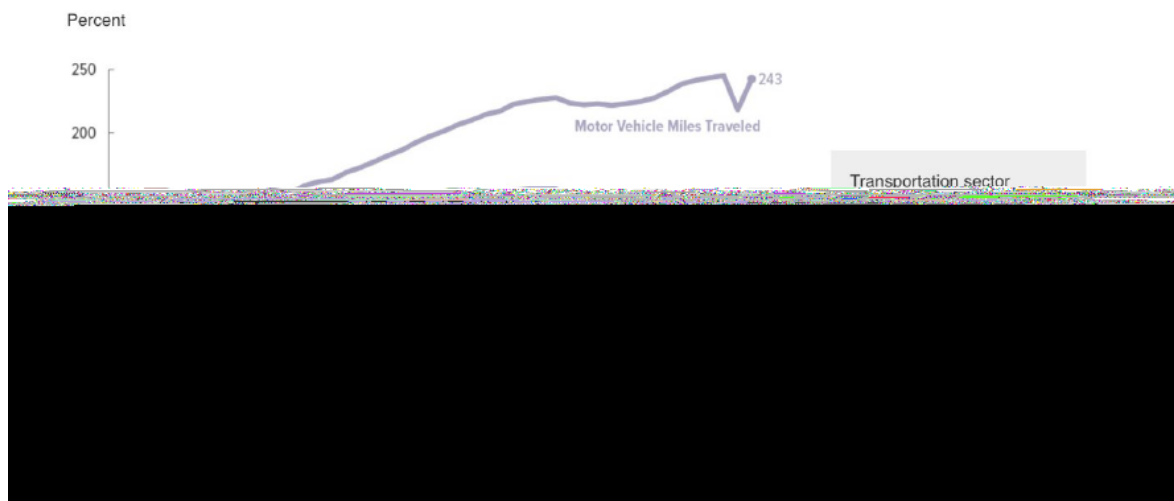
Source: Singapore's First Biennial Transparency Report under the United Nations Framework Convention on Climate Change (2024), Chapter 2. Available at:

<https://unfccc.int/sites/default/files/resource/Singapore%20BTR1%202024.pdf>

In another example, the Party describes the circumstances likely behind the limited growth of emissions it would otherwise expect to have increased.

"Improvements in fuel economy, an increasing share of hybrids and EVs, and the use of biofuels have contributed to a decline in the emissions per mile travelled of light-duty vehicles. This has limited the growth in emissions from ground transportation despite an upward trend in motor vehicle miles travelled, and a shift to heavier vehicles (Figure 3-21)."

Figure 3-21: CO₂ Emissions in the Transportation Sector, Motor Vehicle Miles Travelled, and Emissions Per Mile Traveled of Light-Duty Vehicles, as a Percentage of 1975 Values



Summary box, within graphic: Transportation sector emissions have not risen nearly as much as vehicle miles traveled because gains in fuel economy have reduced emissions per mile of travel.

Source: Figure 3-21. 2024 U.S. Biennial Transparency Report: First Biennial Transparency Report of the United States of America. Available at:

<https://unfccc.int/sites/default/files/resource/2024%20U.S.%20Biennial%20Transparency%20Report.pdf>

In a third example, the Party describes the economic circumstances that lead to a significant difference in its energy consumption per unit of gross domestic product, compared to other Parties:

"According to the World Bank, South Africa is classified as an upper-middle income country and is the largest economy on the African continent. South Africa's Gross Domestic Product (GDP) has grown steadily in the years post the COVID 19 pandemic, expanding by 2,0% between 2021 and 2022, from R4,50 trillion to R4,60 trillion. However, South Africa faces persistent challenges of high unemployment, poverty, and inequality, which are deeply entrenched in its socioeconomic fabric. With an unemployment rate exceeding 30%, especially among the youth, and a substantial portion of the population living in poverty, the country struggles with low economic mobility and widening income disparities. These issues are compounded by slow economic growth, exacerbating the socio-economic divide. South Africa continues to be one of the leading suppliers of mineral commodities globally. Consequently, its overall energy consumption per unit of GDP is approximately 50% higher than the worldwide average. This elevated consumption is fuelled by energy-intensive sectors and the specific type of coal utilized in the energy supply system. According to the 2021 South African Energy Balance, South Africa's total primary energy supply (TPES) is dominated by coal, which

constituted 71% of the TPES, followed by crude oil with 23% and nuclear with 3%. Renewables account for less than 1% of TPES.

The energy sector in South Africa is of vital importance to the economy as it creates jobs and value by extracting, transforming and distributing energy goods and services throughout the economy. As a carbon-intensive economy, heavily reliant on coal for energy production, South Africa's economic model is vulnerable to both environmental and economic pressures. The country's dependence on fossil fuels for industrial activity, energy generation, and exports not only contributes significantly to global carbon emissions but also exposes it to risks associated with the global transition to cleaner energy."

Source: South Africa's First Biennial Transparency Report to the United Nations Framework Convention on Climate Change under the Paris Agreement (2024). Available at:

<https://unfccc.int/sites/default/files/resource/First%20Biennial%20Transparency%20Report%20of%20South%20Africa%20under%20the%20PA%202020December%202024.pdf>

ii. Institutional arrangements

a. Description of institutional arrangements

MPG

Para. 61

Describe how institutional arrangements are set up to track progress in implementing and achieving the NDC. Note that for future BTR (BTR2 and subsequent reports), this section also includes any changes in these arrangements from the previous report (applicable to BTR2 and subsequent reports).



Tips

CBIT-GSP provides helpful considerations when describing the Party's institutional arrangements (MPG para. 61):

- "Ensuring sustainability of Institutional Arrangements supports the transition at the national level from the current project-based arrangements (focused on producing individual reports), which lack continuity and adequate resources, to arrangements that establish sustainable teams and data flows that can provide regular and continuously improving, robust information for national reports and to national decision makers.
- Institutional arrangements should be designed keeping in mind the coming evolution that will bring the implementation of the ETF, allowing for continuous improvement to data collection, processing, analysis, compilation and reporting and associated processes."

Source: CBIT-GSP Climate Transparency in coordination with the UN Environment Programme, Copenhagen Climate Centre. Training in enhancing institutional arrangements and effective implementation of the BUR 2. Available at: <https://climate-transparency-platform.org/sites/default/files/2024-07/Institutional%20arrangements-Uganda%20Session%201Day%201.pdf>

b. Arrangements for domestic actions related to the implementation and achievement of the NDC

MPG

Para. 62

If there are other legal, institutional, administrative, or procedural arrangements in place for implementation, monitoring, reporting, or archiving the domestic implementation and achievement of the NDC, the Party must describe them.



Tips

Examples of a domestic action that may be appropriate to describe include

“...legislative arrangements and enforcement and administrative procedures, such as overarching national measures relevant to climate change; decrees, regulations and governmental decisions on the implementation of climate-related measures; and environmental laws, acts and regulations related to stakeholder consultation.”

Source: UNFCCC BTR Review Training: Course C, sub course C1. Available at:
https://unfccc.int/sites/default/files/resource/C1_NC_IA_and_Description_Ed1.pdf

II.B. Description of the NDC under Article 4 of the Paris Agreement

MPG

Covers para. 64

This section describes the NDC. This may include a description of more than one target, depending on the specifics of the NDC. Note that if any updates have been made to the NDC since it was first communicated by the Party, the description of the NDC in this section should include those updates. The following parameters must be included, at a minimum:

- Target(s) and description, including target type(s), as applicable
- Target year(s) or period(s), and whether they are single-year or multi-year target(s), as applicable
- Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s), as applicable
- Time frame(s) and/or periods for implementation, as applicable
- Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases, as applicable
- Intention to use cooperative approaches that involve the use of internationally transferred mitigation outcomes (ITMOs) under Article 6 towards NDCs under Article 4 of the Paris Agreement, as applicable
- Any updates or clarifications of previously reported information, as applicable

This section could be organized by making each of the parameters described above a sub-header with a narrative description and cross-references to the CTF as appropriate. This information could also be provided as a table in this section of the textual report.

Example of an NDC with more than one target

Example of multiple NDC targets: China

“China’s NDC includes the following targets: to have CO₂ emissions peak before 2030 and achieve carbon neutrality before 2060; to lower CO₂ emissions per unit of GDP by over 65 percent from the 2005 level; to increase the share of non-fossil fuels in primary energy consumption to around 25 per cent; to increase the forest stock volume by 6 billion m³ from the 2005 level; and to bring total installed capacity of wind and solar power to over 1.2 billion kW by 2030. China’s NDC is available at the [NDC Registry](#).”

Source: UNFCCC BTR Review Training: Course C, sub course C1. Available at:
https://unfccc.int/sites/default/files/resource/C1_NC_IA_and_Description_Ed1.pdf



CTF—Appendix to Annex II of 5/CMA.3 and CTF 2

See the table in the Appendix to Annex II of 5/CMA.3, Reporting format for the description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates. (While this table is included along with the CTF tables in Annex II of 5/CMA.3, it is not part of the CTF and may be used on a voluntary basis by Parties if they choose.)

See information to be reported in CTF Table 2, Structured summary: Definitions needed to understand NDC.



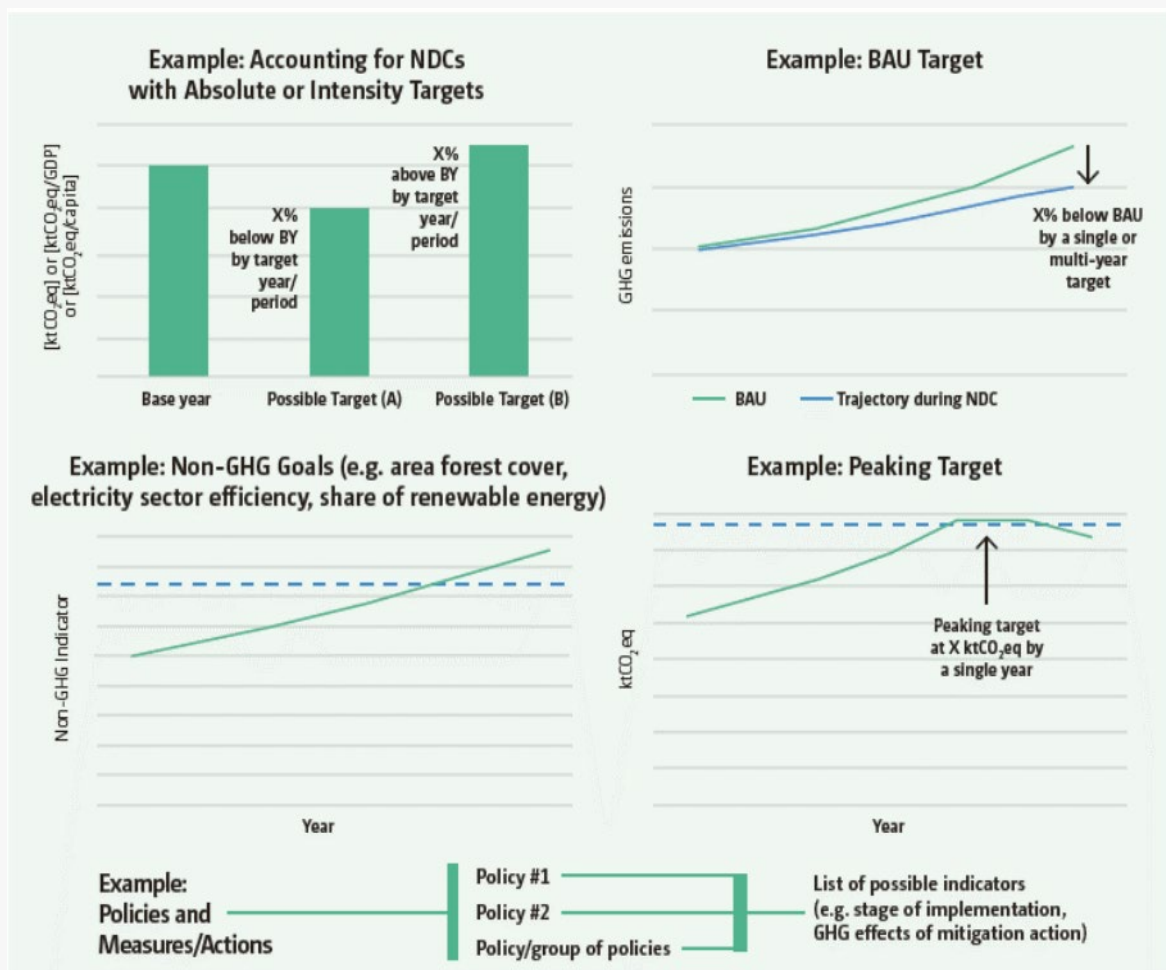
Tips

In most cases, the information to be included in this section will be found in the NDC communicated by the Party.

What are NDC targets?

“Because they are defined at the national level, NDCs can come in many forms. Common classifications for the goals set out in NDCs are as follows (see also the figure below).

- **Absolute emission reduction or limitation target relative to a base year.** These targets may be economy-wide or sector-specific. They can reflect a decrease in emissions compared with a base year or reflect a limitation or an increase from base-year emissions. They can also take the form of a target for carbon neutrality. The Paris Agreement specifies that developed country Parties should undertake economy-wide emission reduction targets, while developing countries are encouraged to move over time towards economy-wide emission reduction or limitation targets.
- **Emission reduction target below a ‘business as usual’ level.** This type of target involves a Party developing the ‘business as usual’ scenario—across the entire economy or for a sector—and committing to limiting emissions to a level below that projected under the ‘business as usual’ trajectory. The target may reflect a single year or a budget over multiple years.
- **Intensity target.** These targets are typically framed as limiting emissions to a predefined amount of GHG emissions (or carbon or energy) per unit of output (e.g. per GDP unit or per capita).
- **Peaking target.** A peaking target allows a Party to emit increasing amounts of GHG emissions for a specified period and then peak either at a certain level of emissions or in a certain year. In this context, the country may define what a ‘peak’ is and how it differs from inter-annual variation.
- **Policies and actions.** In this case, a Party does not necessarily commit to GHG-based action, but rather to implementing one or a series of policies and actions designed to address climate change given the national circumstances (e.g. a low-carbon development strategy for urban planning or renewable energy legislation).
- **Other.** Other targets in NDCs communicated by Parties to date, which in some cases overlap with the ones identified above, include tracking the mitigation co-benefits of adaptation actions and non-GHG targets (e.g. the share of renewables in the energy sector, an increase in forest land area or a specified measure of energy efficiency).”



BAU = Business as usual, BY = base year

Source: UNFCCC BTR Review Training: Course C, sub course C2. Annex 3. Available at: https://unfccc.int/sites/default/files/resource/C2_Tracking%20progress_Ed1.docx.pdf

II.C. Information necessary to track progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement

MPG

Covers para. 65 through 79

This section describes the information needed to track progress made in implementing and achieving the Party's NDC described above in Section II.B.

As with other sections, organize the information referenced in each subsection to best ensure transparency. For example, while the MPGs and CTFs separate the description of the indicator from the definitions needed to understand the indicator (e.g., indicator(s) selected to track progress reported in CTF Table 1 and the definitions needed to understand each indicator reported in CTF Table 2), it may best support a transparent narrative to include those definitions alongside the description of the indicator in the textual report.

i. NDC indicator(s) for tracking progress

MPG

Para. 65–70,
76(a), 78

This subsection describes the relevant indicators used to track progress in implementing and achieving the NDC. Depending on the form of the NDC, these indicators may be quantitative or qualitative. A Party may consider including information on how and why the indicators were chosen for NDC tracking. The description of each indicator must include how the indicator is related to the NDC (MPG para. 76(a)). Refer to MPG para. 78 if the NDC includes mitigation co-benefits (also as referenced in Appendix A of this annotated outline).

Example of how tables can complement and supplement narrative information

Below is an example of how tables in the textual report of the BTR can enhance the narrative description of NDC implementation. If the Party already describes this information elsewhere in the BTR, the tabular summary can reference that BTR chapter/section to direct the reader to where more information may be found.

“For the tracking of progress towards implementing and achieving the NDC of the EU, an indicator is used which has the same unit and metric as the NDC base year and target values. The chosen indicator is ‘annual total net GHG emissions consistent with the scope of the NDC in CO₂ eq.’. Table 2-8 provides more information on this indicator.”

Table 2-8. Indicator for tracking progress

Information	Description
Selected indicator	Annual total net GHG emissions consistent with the scope of the NDC in CO ₂ eq.
Reference level and base year	The reference level is total net GHG emissions of the EU in the base year (1990). The reference level value for the EU is 4,699,405 kt CO ₂ eq.
Updates	This is the first time the reference level is reported, hence there are no updates. The value of the reference level may be updated in the future due to methodological improvements to the EU GHG inventory and to the determination of international aviation and navigation emissions in the NDC scope.
Relation to the NDC	The indicator is defined in the same unit and metric as the target of the NDC. Hence it can be used directly for tracking progress in implementing and achieving the NDC target.
Definitions	Definition of the indicator “annual total net GHG emissions in CO ₂ eq.”: Total net GHG emissions correspond to the annual total of emissions and removals reported in CO ₂ equivalents in the latest GHG inventory of the EU. The totals comprise all sectors and gases listed in the table entitled “Reporting format for the description of a Party’s nationally determined contribution under Article 4 of the Paris Agreement, including updates.” Indirect CO ₂ emissions are included from those Member States that report these emissions.

Note: The information in this table is identical to the information in Common Tabular Format (CTF) tables 1 (“Description of selected indicators”) and 2 (“Definitions needed to understand the NDC”), which were submitted electronically together with this BTR.

Source: The reference level is based on the Annual European Union GHG inventory 1990–2022.

Source: Table 2-8, Lithuania’s First Biennial Transparency Report under the Paris Agreement (2024). Available at: https://unfccc.int/sites/default/files/resource/LT_1BTR_final.pdf



Tips

Paragraph 66 of the MPGs provides examples of NDC indicators, including:

- Net GHG emissions and removals, percentage reduction of GHG intensity
- Relevant qualitative indicators for a specific policy or measure (which includes mitigation co-benefits of adaptation actions and/or economic diversification plans)
- Other (e.g. hectares of reforestation, percentage of renewable energy use or production, carbon neutrality, share of non-fossil fuel in primary energy consumption, and non-GHG related indicators)



CTF Table 1

See CTF 1—Structured summary: Description of selected indicators

ii. Tracking NDC progress

MPG

Para. 69

This subsection describes the progress made in implementing and achieving the NDC by comparing, for each indicator, the most recent information for a given reporting year with the reference value for the indicator. For transparency, it may be useful to include one or more tables to accompany the narrative description.

Example of indicator comparisons for NDC tracking purposes

Below is an example of how a Party presented progress tracking for their NDC.

“Singapore is on track to meeting our 2030 NDC. Our indicator of net GHG emissions and removals was 53.87 Mt CO₂ eq, 58.29 Mt CO₂ eq and 58.59 Mt CO₂ eq in 2020, 2021 and 2022 respectively (inclusive of LULUCF). Singapore will peak our emissions before reducing to around 60 Mt CO₂ eq in 2030.”

Table 15: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement

Indicator	Description
Net GHG emissions and removals	
Information for the reference point(s), level(s), baseline(s), base year(s) or starting point(s)	As Singapore's NDC is an economy-wide absolute GHG emissions limitation target, only the target of around 60 Mt CO ₂ eq in 2030 will be used as a reference point to track progress towards the implementation and achievement of our NDC. Our NDC does not take reference from any baselines, base years, or starting points.
Information for previous reporting years during the implementation period of its NDC under Article 4	2020 Total GHG Emissions: 53,872 kt CO ₂ eq 2021 Total GHG Emissions: 58,285 kt CO ₂ eq Includes contribution from LULUCF
The most recent information	2022 Total GHG Emissions: 58,587 kt CO ₂ eq Includes contribution from LULUCF
Progress made towards the NDC, as determined by comparing the most recent information for each selected indicator, including for the end year or end of period, with the reference point(s), level(s), baseline(s), base year(s) or starting point(s)	The most recent information for the indicator of net GHG emissions and removals is 58,587 kt CO ₂ eq in 2022. Singapore is on track to meeting our NDC of reducing emissions to around 60 Mt CO ₂ eq in 2030 after peaking emissions earlier.
Where applicable, information on GHG emissions and removals consistent with the coverage of its NDC under Article 4	As above. Our indicator's coverage is the same as our NDC.
Contribution from the LULUCF sector for each year of the target period or target year, if not included in the inventory time series of total net GHG emissions and removals, as applicable	Not applicable. Our inventory time series includes the contribution from the LULUCF sector.
Total net GHG emissions and removals, taking into account the contribution from the LULUCF sector	Information is as above. Our inventory time series includes the contribution from the LULUCF sector.
Information on cooperative approaches that involve the use of internationally transferred mitigation outcomes towards an NDC under Article 4	Not applicable. As of 2022, Singapore has not participated in cooperative approaches that involve the use of ITMOs. We plan to do so and will report the relevant information accordingly when we do.

Source: Table 15. Singapore's First Biennial Transparency Report under the United Nations Framework Convention on Climate Change (2024), Chapter 2. Available at:
<https://unfccc.int/sites/default/files/resource/Singapore%20BTR1%202024.pdf>



Tips

The training for BTR technical expert reviewers also provides the following elaboration on indicators for tracking progress:

What is an indicator?

"...[T]here is no definition in the MPGs on what an indicator is, except that it should be self-determined by Parties, must be relevant for the NDC, and may be qualitative or quantitative. [...]"

Although there is no agreed definition in the MPGs as to what an indicator is, there are several examples in the relevant literature of how an indicator could be defined. For example:

The European Environment Agency defines an indicator as ‘a measure, generally quantitative, that can be used to illustrate and communicate complex phenomena simply, including trends and progress over time’. For more information, visit <https://www.eea.europa.eu/ims>.

The Organization for Economic Co-operation and Development defines the (environmental) indicator as ‘a parameter, or a value derived from parameters, that points to, provides information about and/or describes the state of the environment, and has a significance extending beyond that directly associated with any given parametric value’. For more information, visit <https://www.oecd.org/environment/environment-at-a-glance/>.”

Source: UNFCCC BTR Review Training: Course C, sub course C2. Available at: https://unfccc.int/sites/default/files/resource/C2_Tracking%20progress_Ed1.docx.pdf

iii. Assessment of NDC achievement

MPG

Para. 70

This subsection is only relevant if the BTR contains information on the end year or the end of the period of the NDC described. In such instances, this subsection assesses whether the NDC target(s) has been achieved. This is done by comparing, for each relevant indicator, the target level with the reported information for the target year or the target period. For transparency, it may be useful to include one or more tables to accompany the narrative description.



Tips

Assessing whether the NDC target(s) has been achieved will likely not be applicable for the first BTR. However, keep in mind that:

“For the first BTR that contains information on the end year or end of the period of its NDC, each Party shall provide an assessment of whether it has achieved the targets for its NDC.”

Source: UNFCCC BTR Review Training: Course C, sub course C2. Available at: https://unfccc.int/sites/default/files/resource/C2_Tracking%20progress_Ed1.docx.pdf



CTF Table 4

See CTF Table 4—Structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement

iv. Definitions for NDC

MPG

Para. 73

This subsection provides any definitions that are necessary to understand the NDC. These definitions are provided where it is necessary for transparency, so the reader fully understands the NDC and how progress in implementation and achievement of the NDC is tracked. These definitions may include:

- Definitions needed to understand NDC indicators.
- Definitions related to any sector or category defined differently than in the NIR.
- Definitions necessary to understand the mitigation co-benefits of adaptation actions and/or economic diversification plans.

Example of narrative text for NDC definitions

In the examples below, the narrative text provides reasoning for why additional definitions are not provided.

“Singapore’s NDC, as defined in Chapter 2 Section B, is economy-wide and covers all sectors and categories. As the coverage is equivalent to what is reported in our NID, no further definitions are required to understand our NDC.”

Table 12: Definitions needed to understand NDC

	Definitions needed to understand NDC
Sector or category defined differently than in the national inventory report	Not applicable.
Mitigation co-benefits of adaptation actions and/or economic diversification plans	Not applicable.
Other relevant definitions	Not applicable.

Source: Table 12. Singapore’s First Biennial Transparency Report under the United Nations Framework Convention on Climate Change (2024), Chapter 2. Available at: <https://unfccc.int/sites/default/files/resource/Singapore%20BTR1%202024.pdf>



CTF Table 2

See CTF 2—Structured summary: Definitions needed to understand NDC

v. NDC accounting approach

MPG

Para. 71–72, 74–77

This subsection describes how the NDC accounting approach used promotes environmental integrity and transparency, accuracy, completeness, comparability, and consistency (commonly referred to as the TACCC principles).² Note that reporting for the second and subsequent NDCs must explicitly address how the accounting approach used is consistent with [4/CMA.1](#) (see the “Tips” box below for more information). Information can be presented in both narrative and tabular format; note that tabular information can complement and supplement narrative text to present information in a transparent and easily understood manner.

For the Party’s NDC accounting approach, describe at minimum each element indicated in MPG paras. 74–77. These include reporting elements such as (not an exhaustive list):

² As defined by IPCC in its Introduction to the 2006 Guidelines, available at: https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1_Volume1/V1_1_Ch1_Introduction.pdf

- Target(s) and indicators for the NDC
- As applicable, key parameters, assumptions, definitions, data sources and models used for indicators and accounting elements
- IPCC guidelines used
- GHG metrics used

Example of an accounting approach

The accounting approach for tracking progress is specific to the NDC. Such accounting approaches may be simple or more complex, depending how the NDC target(s) is structured. A simple example is an economy-wide GHG target (absolute reduction in net GHG emissions relative to GHG emissions for a base year), where the accounting approach used to track progress is to compare the base year net CO₂e GHG emissions and removals in the NIR with the most recent reporting year net CO₂e GHG emissions and removals in the NIR. The methodology applied in this example is to compile the NIR in accordance with the 2006 IPCC Guidelines for GHG inventories.



Tips

Ensure that reporting for the Party's **second** NDC is consistent with [4/CMA.1](#). Annex II provides the methodologies and common metrics assessed by the IPCC (and subsequently adopted by the CMA):

- Accounting for anthropogenic emissions and removals is in accordance with methodologies and common metrics assessed by the IPCC and adopted by the CMA.
- Ensuring methodology consistency, including on baselines between the communication and implementation of NDCs.
- Striving to include all categories of anthropogenic emissions or removals in the NDC and, once a source, sink or activity is included, continuing to include it.
- Providing an explanation of why any categories of anthropogenic emissions or removals are excluded.

What is NDC accounting?

"NDC accounting refers to the processes, rules and principles applied by Parties in tracking progress in implementing and achieving their NDCs established under Article 4 of the [Paris Agreement]."

The integrity of this NDC accounting

"...relies on consistency between the information (i.e., data sources, coverage, methodologies, assumptions, etc.) a Party presents as its goal(s) in its NDC.... Your accounting should be detailed enough to make it clear how double counting was avoided. For example, a concern is within the land-use sector where double counting could imply greater emissions reductions than reality."

It may be that

"...applying the principles of [TACCC] reinforces overall efforts to promote the environmental integrity of the accounting framework and avoid double counting."

Source: UNFCCC (2022) Reference Manual for the Enhanced Transparency Framework under the Paris Agreement: Understanding the enhanced transparency framework and its linkages.

https://unfccc.int/sites/default/files/resource/v2_ETFreferencemanual.pdf

**CTF Table 3**

See CTF 3—Structured summary: Methodologies and accounting approaches—consistency with Article 4, paragraphs 13 and 14, of the Paris Agreement and with decision 4/CMA.1

**CTF Table 4**

See CTF 4—Structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement

II.D. Mitigation policies and measures (PAMs), actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving the NDC under Article 4 of the Paris Agreement

MPG

Covers para. 80 through 90

This section describes the mitigation actions, policies, and measures, together referred to here as “policies and measures” (PAMs), related to achieving and implementing the Party’s NDC. If relevant, where adaptation actions and economic diversification plans have mitigation co-benefits, PAMs reported in this section include those actions,

policies, and measures that contribute to mitigation co-benefits that result from these adaptation actions and economic diversification plans.

**Tips**

Key terms:

- “Mitigation policies or mitigation plans generally refer to a decision or a set of decisions that a government takes to achieve certain objectives.
- Actions or measures generally refer to a concrete activity or set of activities taken by a government to implement a policy or plan.
- Mitigation co-benefits result from actions undertaken as part of adaptation and/or economic diversification plans where these generate emissions reductions and thereby contribute to achieving mitigation outcomes....
- Response measures in the context of the UNFCCC are the actions, policies, programmes and other measures undertaken by Parties mostly for mitigating GHG emissions.”

Source: UNFCCC BTR Review Training: Course C, sub course C3. Available at:

https://unfccc.int/sites/default/files/resource/C3_Mitigation_Actions_Ed1.docx.pdf

i. Mitigation policies and measures (PAMs)³

MPG

Para. 80–85,
88

This subsection describes the actions, policies, and measures (collectively referred here as “policies and measures”, or PAMs) that support implementation and achievement of the NDC, and that have the most significant impact on national GHG emissions and removals. This includes those PAMs impacting key categories⁴ within the Party’s national GHG inventory.

If possible, the Party should report these key mitigation PAMs by sector (e.g., energy; transport; industrial processes and products use (IPPU); agriculture, land use, land-use change and forestry (LULUCF); waste; and other). Where it is not possible to report an action by sector, for example where a PAM impacts multiple sectors or has crosscutting impacts, this can be reported under the category “other” or “other-crosscutting”. If the Party’s national circumstances are such that it does not report under these suggested sectors, indicate (or provide a reference to) an explanation of those differences.

In general, this subsection provides an opportunity to provide a compelling narrative that describes the actions the Party is taking to implement and achieve the NDC.

Example of a tabular format presenting mitigation policies, measures, actions and plans

The table below presents information from Sri Lanka’s Table 2.14 (including excerpts in this annotated outline for brevity). Note that the Party points to a separate document where sector specific information is available.

“Details of the actions planned to achieve sector-wise NDCs are outlined in the NDCs Implementation Plan 2021–2030 (MoE, 2023). This document serves as a comprehensive blueprint for the implementation of measures aimed at fulfilling Sri Lanka’s sector-specific NDCs. This section summarizes the policies, measures, actions and plans related to the implementation and achievement of NDCs in Sri Lanka. They are presented in Table 2.14.”

³ Per MPG para. 84, this includes information on policies and measures contributing to mitigation co-benefits resulting from adaptation actions or economic diversification plans. These, too, should be reported within CTF Table 5. “Examples of adaptation actions or economic diversification plan measures that may result in mitigation co-benefits include the following: apply climate-smart agriculture; reducing food waste; adapting coastal ecosystems; [...]” Source: UNFCCC BTR Review Training: Course C, sub course C3. Available at:

https://unfccc.int/sites/default/files/resource/C3_Mitigation_Actions_Ed1.docx.pdf

⁴ Key category(ies) defined by IPCC: “A key category is one that is prioritised within the national inventory system because its estimate has a significant influence on a country’s total inventory of greenhouse gases in terms of the absolute level, the trend, or the uncertainty in emissions and removals. Whenever the term key category is used, it includes both source and sink categories.” (Volume I, Chapter 4: https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/1_Volume1/V1_4_Ch4_MethodChoice.pdf)

Table 2.14: Mitigation policies and measures, actions and plans related to implementing and achieving NDCs

Name	Description	Objectives	Type of instrument	Status	Sector(s) affected	Gases affected	Start year of implementation	Implementing entity or entities	Estimates of GHG emission reductions (Gg CO ₂ eq)	
									Achieved	Expected
Enhance renewable energy contribution to the national electricity generation	Establish wind power plants	Increase installed wind power share by 865 MW (Unconditional 128 MW, Conditional 737 MW) by 2030	Technology	Implemented	Energy	CO ₂ , CH ₄ , N ₂ O	2021	MoP&E, CEB, SLSEA	452.51	NE
	Establish rooftop and ground-mounted solar PV	Increase solar power capacity (rooftop & ground-mounted) by 2,263 MW (335 MW unconditional, 1,928 MW conditional)	Technology	Implemented	Energy	CO ₂ , CH ₄ , N ₂ O	2021	MoP&E, CEB, SLSEA	869.85	NE
	Power generation through sustainable biomass resources	Addition of 65 MW (Unconditional 10 MW, Conditional 55 MW)	Technology	Implemented	Energy	CO ₂ , CH ₄ , N ₂ O	2021	MoP&E, CEB, SLSEA	133.86	NE
	Establish large and	Addition of Large Hydro: Unconditional 31	Technology	Implemented	Energy	CO ₂ , CH ₄ , N ₂ O	2021	MoP&E, CEB, SLSEA	31.25	NE
Introduce NDC support policy tools and instruments	Support industries in adopting ISO systems focused on reducing GHG emissions.	25% of industries adopting various ISO system having focus on GHG reduction such as ISO 50001 and ISO14064-1 by end of 2030	Policy	127 of industries have adopted various ISO system on GHG reduction by 2030	Energy, Waste	CO ₂ , CH ₄ , N ₂ O	2021	MOI	NE	NE
	Ensure continuous biomass availability for industrial applications.	To have access to sustainable biomass to all the relevant industries	Policy	5 industries certified for sustainable biomass	Energy	CO ₂ , CH ₄ , N ₂ O	2021	SLSEA, FD	NE	NE
GHG reduction of clinker production in the cement industry	Reduce GHG emissions by avoiding clinker production.	To reduce GHG emission in Clinker production	Technology	Reduced use of clinker in production of cement by replacing clinker with 319172 tone of fly ash by end of 2023	IPPU	CO ₂ , CH ₄ , N ₂ O	2021	MOI, SLSI, Cement Industries	No reduction. Replacement results the reduction of clinker imports	NE
Enteric Fermentation	Improve feed quality, breeds, and practices to reduce CH ₄ emissions.	Measure to reduce GHG emissions in agricultural soils (CH ₄ emission)	Law / Standard, Subsidy, Awareness, Raising, R & D facility, Other	Initiated	Agriculture/ Livestock	CH ₄	2021	DAPH, PDAPHs, NLDB, MASL, Academia, Private Sector	2,130	2047

Adapted from source: Table 2.14, First Biennial Transparency Report: Sri Lanka 2024. Available at: <https://unfccc.int/sites/default/files/resource/First%20Biennial%20Transparency%20Report%20-%20Sri%20Lanka%20-%202024.pdf>



MPGs para. 83

For each action, policy, and measure reported, the Party may (i.e., reporting is optional) describe the associated costs, non-GHG mitigation benefits, and how these actions interact with each other.

FX

Flexibility Provision

Parties shall, to the extent possible, provide expected and achieved GHG emissions reductions for its PAMs in the tabular format (CTF Table 5). However, developing country Parties that need flexibility in the light of their capacities are encouraged to report this information.

Note that Parties should exercise caution in deciding whether to formally invoke flexibility for this provision. Paragraph 85 of the MPGs states that

*“Each Party shall provide, **to the extent possible**, [emphasis added] estimates of expected and achieved GHG emission reductions for its actions, policies and measures in the tabular format referred to in paragraph 82 above [a reference to what was subsequently adopted as CTF Table 5]; those developing country Parties that need flexibility in the light of their capacities with respect to this provision are instead encouraged to report this information.”*

As a result, while para. 85 of the MPGs requires estimates of GHG emission reductions, the provision already provides flexibility to Parties through the reference to the requirement to provide estimates of GHG emission reductions “to the extent possible”.

Note that where a specific flexibility provision is exercised by a developing country Party, this use of a flexibility provision comes with certain obligations, including:

- Clearly indicate the provision to which flexibility is applied;
- Concisely clarify capacity constraints, noting that some constraints may be relevant to several provisions; and
- Provide self-determined estimated time frames for improvements in relation to those capacity constraints.

For more information on flexibility, refer to Appendix B of this annotated outline as needed.



Tips

A technical expert reviewer may ask how the Party determined which actions, policies and measures to include in its BTR. Since the Party shall provide information on the actions, policies, and measures that have the most significant impact on GHG emissions or removals (and those impacting key categories), it is important to understand how the Party determined which actions, policies, and measures have a significant effect on GHG emissions and removals. The Party may find it most transparent to include this explanation within its BTR.



CTF Table 5

See CTF 5—Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement

ii. Methodologies and assumptions used to estimate GHG emission reductions or removals from PAMs

MPG

Para. 86

Where estimates of GHG emission reductions or removals are provided for one or more actions, policies, and measures, this subsection describes the methodologies and assumptions used to estimate the GHG emission reductions or removals for each. A Party may present this in the body of the BTR (for example, in the subsection described here) though the Party may find presenting the information as an annex to its BTR is more conducive to transparent reporting. This information must be provided, to the extent available (per MPG para. 86).



Tips

CTF Table 5 presents the estimates of GHG emission reductions, both achieved and expected, as individual columns (see screenshot below). However, as noted in MPG para. 86 and in this annotated outline subsection, to the extent available the Party shall describe the methodologies and assumptions used for these estimates. Providing this information in an annex may allow for more space to improve transparency and completeness.

<i>Implementing entity or entities</i>	<i>Estimates of GHG emission reductions (kt CO₂ eq)^{j, k}</i>	
	<i>Achieved</i>	<i>Expected</i>

Adapted from: CTF Table 5. Available at:

https://unfccc.int/sites/default/files/resource/CMA2021_L10a2E.pdf



CTF Table 5

See CTF Table 5—Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement

iii. Past PAMs no longer in place

MPG

Para. 87

This subsection describes any actions, policies, and measures that are no longer in place, if reported in a prior BTR. If this is the case, the Party will need to explain in this subsection why such prior PAMs are no longer in place.



Tips

Describing mitigation actions, policies, and measures that are no longer in place may only apply to BTR2 and subsequent reports.

iv. Impacts of PAMs on longer-term trends in GHG emissions and removals

MPG

Para. 89

This subsection provides, to the extent possible, information on how mitigation actions, policies and measures are modifying the Party's longer-term trends in GHG emissions and removals.



Tips

This may not need to be a separate subsection within Chapter II. Consider if information on the emission reductions of PAMs is already reported in CTF Table 5; if so, those impacts could be summarized in this subsection. Alternatively, information on the Party's national context, including climate strategy and planned actions may address this information. It may also make sense when describing significant PAMs in Section II.D.i (described above) to describe the impact of these PAMs on longer-term trends in GHG emissions and removals.

Adapted from source: UNFCCC BTR Review Training: Course C, sub course C3. Available at: https://unfccc.int/sites/default/files/resource/C3_Mitigation_Actions_Ed1.docx.pdf

v. Assessment of economic and social Impacts of PAMs

MPG

Para. 90

This subsection is encouraged, and addresses, to the extent possible, consideration of how the implementation of mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, may have both positive and negative social, environmental and economic consequences. These concepts are often referred under the UNFCCC using the umbrella term of “response measures”, which refers to the social and economic impact (both positive and negative) of actions taken in response to climate change.

In this subsection, a Party is encouraged to provide detailed information, to the extent possible, on the assessment of economic and social impacts of its response measures to climate change, which may include the impacts of both key mitigation and adaptation actions.



Tips

What is a response measure?

“Response measures in the context of the UNFCCC are the actions, policies, programmes and other measures undertaken by Parties mostly for mitigating GHG emissions. In addition to their direct mitigation impact, implementation of these response measures can have social, environmental and economic consequences (both positive and negative) with impacts that could be either domestic or cross-border.”

Examples of social impacts include “...changes in gender equality, social relationships, health, education....”

Examples of economic impacts include “...changes in national or regional gross domestic production, employment levels and income.”

Consider both qualitative (e.g., stakeholder interaction analyses) and quantitative approaches (e.g., macroeconomic models).

Source: UNFCCC BTR Review Training: Course C, sub course C3. Available at: https://unfccc.int/sites/default/files/resource/C3_Mitigation_Actions_Ed1.docx.pdf

**MPGs para. 90**

The Party is encouraged to provide detailed information (to the extent possible) on their assessment of economic and social impacts of response measures.

II.E. Summary of GHG emissions and removals

MPG

Covers para. 91

This section provides a summary of a Party's GHG emissions and removals. This section applies where a Party provides a stand-alone national GHG inventory report (NIR) submission, which includes a national inventory document (NID) and common reporting tables (CRTs) for the electronic reporting of the information in the national inventory report. This information must be provided for those reporting years corresponding to the Party's most recent NIR, in a tabular format. In practice, for transparency it is recommended to provide the summary of GHG emissions and removals in both a narrative and tabular format in this subsection.

If a Party did not provide a stand-alone NIR, pursuant to MPGs paras. 10, 12 and 38, the Party must provide the equivalent of an NID as a chapter in the BTR, accompanied by the CRTs. Parties may choose whether to provide a stand-alone NIR (including CRT) or provide the NIR as a chapter in the BTR accompanied by the CRT.⁵

Example of a narrative summary supported by tables and figures

Within the BTR narrative, it may be helpful to provide a tabular or graphical presentation of the GHG emissions and removals trends being described. The Party could provide different types of graphs (e.g., a line graph in Figure 1.5 or an area graph in Figure 1.6, below). Similar to CRT Table 10, a Party may provide tabular iterations of the data, in the example of Table 1.10 below, focusing on a single sector. The following text provides examples of how tables and figures can add the BTR narrative.

"South Africa's GHG emissions excl. LULUCF were 489 188 Gg CO₂e in 2000 and these decreased by 2.2% by 2022. Emissions (excl. LULUCF) in 2022 were estimated at 478 300 Gg CO₂e. The decrease in emissions compared to 2020 is attributed to the marginal decrease in emissions across all the sectors (Energy, IPPU, Agriculture and Waste). Emissions (excl. LULUCF) in 2022 were estimated at 478 300 Gg CO₂e, this represents an increase of 1,4% compared to 2020 and was influenced by increased activities post the COVID-19 pandemic in the manufacturing sector. Annual emissions data for South Africa from 2000 to 2022, both excluding and including LULUCF, measured in gigagrams of carbon dioxide equivalent (Gg CO₂e) is shown in Figure 1.5."

⁵ While select MPGs are cited within this section, the Party should adhere to all MPGs related to BTR Chapter 1. National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases, which are not elaborated upon in this annotated outline. Important metrics, like the appropriate global warming potential (GWP), noted in MPG para. 37, are provided (in this example, citing the IPCC Fifth Assessment Report GWP values).

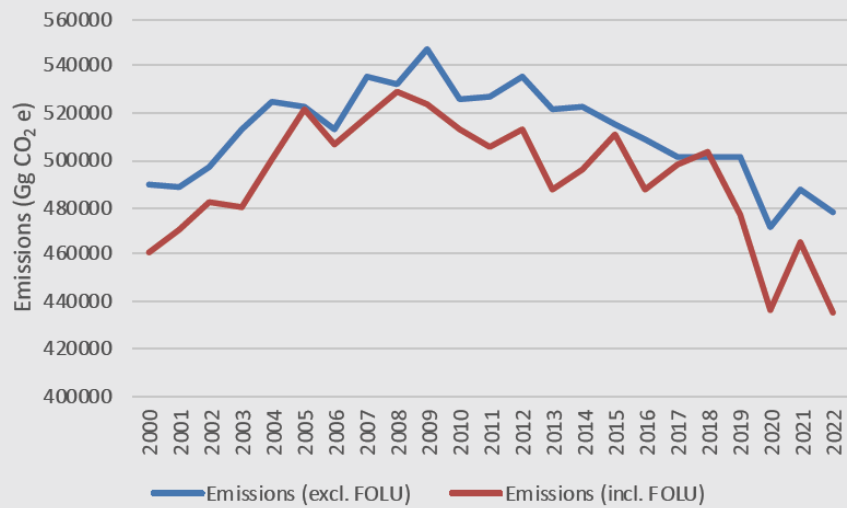


Figure 1.5: National GHG emissions (excluding and including FOLU) for South Africa, 2000 – 2022.

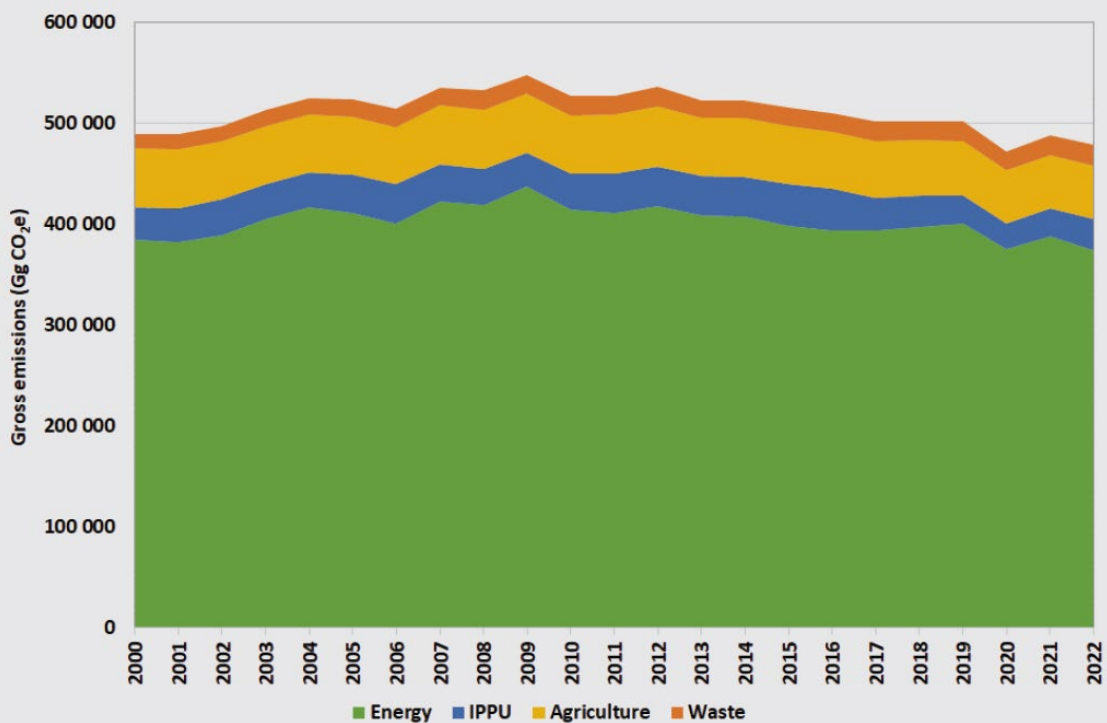


Figure 1.6: Trend in emissions by sector for 2000 to 2022.

Table 1.10: Summary of the change in emissions from the IPPU sector between 2000 and 2022

GHG source categories	Emissions (Gg CO ₂ e)			Difference (Gg CO ₂ e)		Change (%)	
	2000	2020	2022	2000- 2022	2020- 2022	2000- 2022	2020- 2022
2.IPPU	32 781	24 858	30 598	-2 183	5 740	-6,7	23,1
2.A Mineral industry	4 371	4 774	6 055	1 684	1 281	38,5	26,8
2A1 Cement Production	3 871	3 796	5 023	1 152	1 227	29,8	32,3
2A2 Lime Production	426	715	694	268	-21	62,8	-3,0
2A3 Glass Production	74	154	191	117	37	157,5	23,9
2A4 Other Process Uses of Carbonates	NE	109	147		38		34,7

Source: Figures 1.5 and 1.6, and Table 1.10. South Africa's First Biennial Transparency Report to the United Nations Framework Convention on Climate Change under the Paris Agreement (2024). Available at: https://unfccc.int/sites/default/files/resource/First%20Biennial%20Transparency%20Report%20of%20South%20Africa%20under%20the%20PA_20%20December%202024.pdf



CTF Table 6 and CRT Table 10

See CTF Table 6—Summary of greenhouse gas emissions and removals in accordance with the common reporting table 10 emission trends—summary

According to paragraph 91 of the MPGs: each Party that submits a stand-alone national inventory report shall provide a summary of its GHG emissions and removals. This information shall be provided for those reporting years corresponding to the Party's most recent national inventory report, in a tabular format.

Therefore, see also CRT Table 10—Table 10 emissions trends—summary

Available at: https://unfccc.int/sites/default/files/resource/%40CRT_2.80.xlsx
(<https://unfccc.int/documents/311076>)



Tips

If the Party did not submit an NID as a stand-alone report, refer to the resources in the Introduction to this annotated outline for help.

II.F. Projections of GHG emissions and removals

MPG

Covers para. 92
through 102

This section presents a Party's projections of their greenhouse gas emissions and removals. Remember, projections are not an indication of progress towards implementation and achievement of the NDC.⁶

⁶ Per MPG para. 93, the only instance in which a projection is used to assess progress towards the implementation and achievement of an NDC is where a Party identified a reported projection as its baseline. See Section II.B.

i. General projections considerations

MPG

Para. 93,
98–99,
101–102

The following subsection describes the overarching considerations when preparing to describe the Party's projections and may not need to be a separate section within the BTR.

MPG para. 98 indicates that projections must be presented for national totals as well as sectoral basis totals, by gas. The MPGs describe three scenarios of projections, only one of which is mandatory ("with measures" scenario).

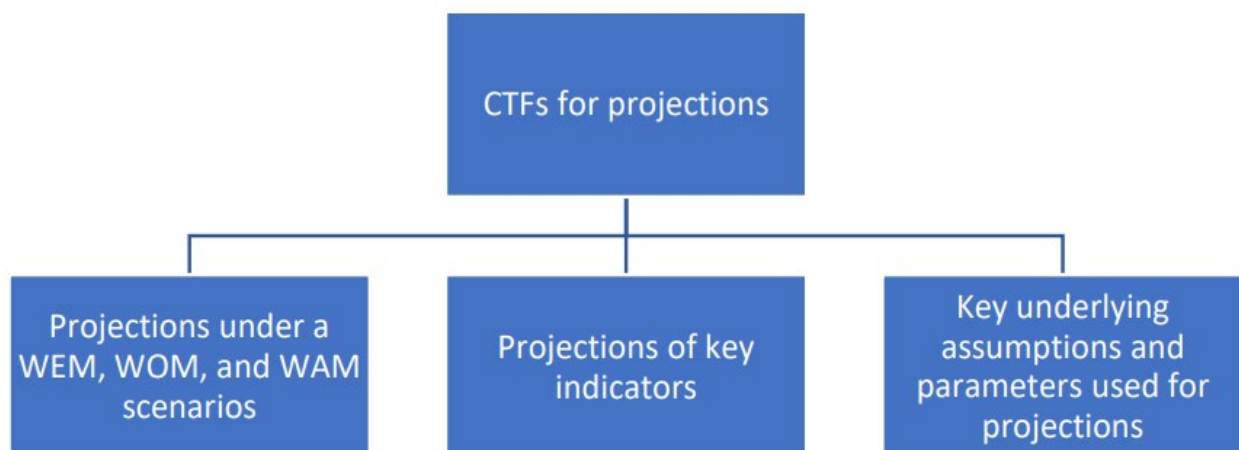
Transparent information on projections is best presented through a combination of narrative text, figures and graphs, and tables. A Party may choose to organize the narrative discussion, tables, and figures and graphs into separate subsections—if it makes the most sense for its national circumstances and presents the information in a transparent manner. See Appendix C of this annotated outline for a more detailed example of how to organize a projection section of Chapter II.

A Party must present the projections relative to actual inventory data for the preceding years and present projections in a tabular and graphical format (MPG paras. 99 and 101). An example of a graphical presentation of projections is provided below. Note that while it makes sense for transparency to present information in the textual report of the BTR (as described in this annotated outline) in a narrative, graphical, and tabular format, tabular information for projections must also be reported in CTF.

While reporting projections is required, developing country Parties that need flexibility in the light of their capacities are instead encouraged to report these projections. In addition, other specific flexibility provisions may be applied by developing country Parties that need flexibility in the light of their capacities. See the "Flexibility Provision" boxes below for more information.

Elements to consider for reporting projections

Consider that there are several elements to be reported or described pertaining to the Party's projections. This includes presentation of results of projections of GHG emissions and sinks, presentation of results for projections of key NDC indicators, and a description of projection methods, including underlying assumptions and parameters used for projections. If it makes sense for the textual BTR narrative to discuss these pieces differently or combine them in a different way from what is required in the CTF, the Party may do so, with the caveat that the relevant CTF tables, as described below, must still be provided.



Source: UNFCCC BTR Review Training: Course C. Figure 2. Available at:
https://unfccc.int/sites/default/files/resource/C4_Projections_Ed1.docx.pdf

WEM = “with measures”

WOM = “without measures”

WAM = “without additional measures”

FX

Flexibility Provision

Para. 92 of the MPGs states that “Each Party shall report projections pursuant to paragraphs 93–101 below; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report these projections.” This means that while reporting projections is mandatory under the MPGs, developing country Parties that need flexibility, in the light of their capacities, are instead encouraged to report projections, in accordance with paras. 93–101 of the MPGs. In addition, for those developing countries that need flexibility in the light of their capacities with respect to paras. 93–101 of the MPGs, and that do report projections, they may report using a less detailed methodology or coverage (MPG para. 102). For more information on flexibility, refer to Appendix B of this annotated outline, as needed.

In practice, this means that developing country Parties that need flexibility in the light of their capacities have flexibility in *both* whether they choose to report projections, and in the methodology used for projections and coverage of those projections (e.g., sectors, gases).



Tips

Projection modeling support:

- PATPA, *Projections of Greenhouse Gas Emissions and Removals: An Introductory Guide for Practitioners*
- EPA provides technical assistance for [projections of GHG emissions and sinks](#).

ii. Projections of GHG emissions and removals

MPG

Para. 92,
94–95,
100

This subsection describes the results of projections of GHG emissions and removals. The Party must report a projection of all GHG emissions and removals with currently implemented and adopted policies and measures, which is referred to as a “with measures” scenario. A Party may also choose to report projections for a “with additional measures” scenario and a “without measures” scenario.

The projections presented must begin with the most recent year in the NIR (e.g., 2022) and extend at least 15 years beyond the next year ending in zero or five (e.g., the year 2040 extends 15 years beyond the year 2025, which is the first year ending in “5” that follows the most recent year reported in the NIR of 2022). The Party must provide projections both with and without LULUCF contributions, in accordance with MPG para. 100.

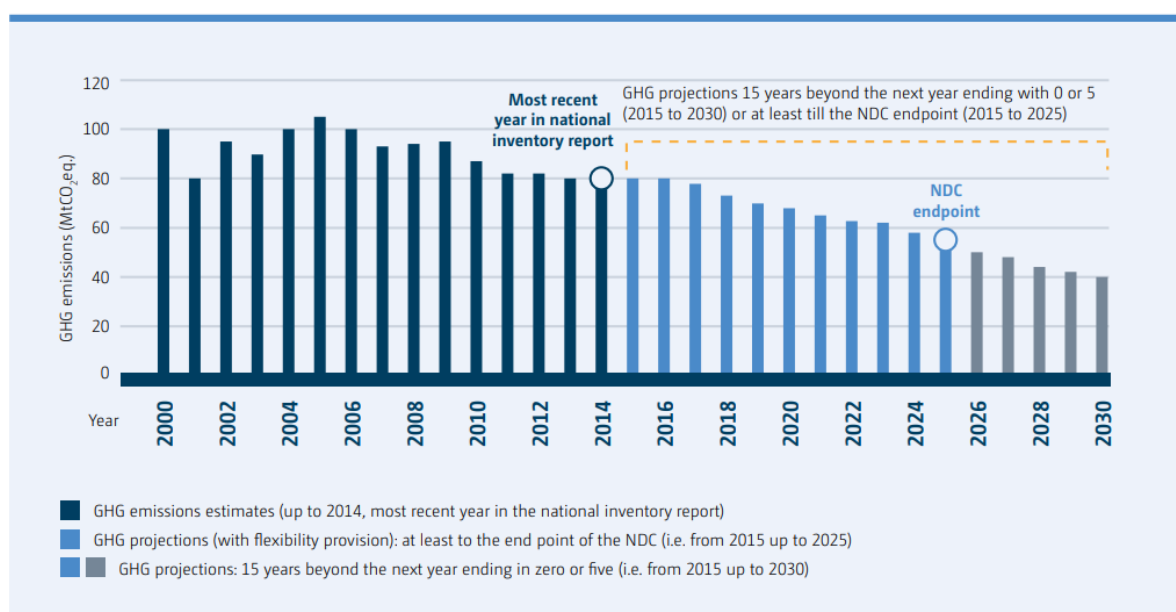
For transparency, projections are best presented in the textual report of the BTR through a combination of narrative text, figures, and tables. Some examples are presented here. These results must also be presented in tabular format in CTF Tables 7–9, as applicable for each of the projection scenarios included in the BTR.

Example of graphical presentations

Below are examples of how to present the projections in graphical format. Both are hypothetical and would need to be adapted based on the Party's national circumstances. Figure 8 presents the time period for projections and also shows how a developing country Party may apply the flexibility provision addressing the projection timeframe (i.e., instead of projecting to 2030, the Party may end the time series at 2025, consistent with their NDC endpoint). Figure 9 presents all three projection scenarios ("with measures", "without measures", and "with additional measures"). While only the "with measures" scenario is required within the MPGs, this example shows how a graphic could support a narrative by visually showing the positive effects of the intended measures.

Figure 8

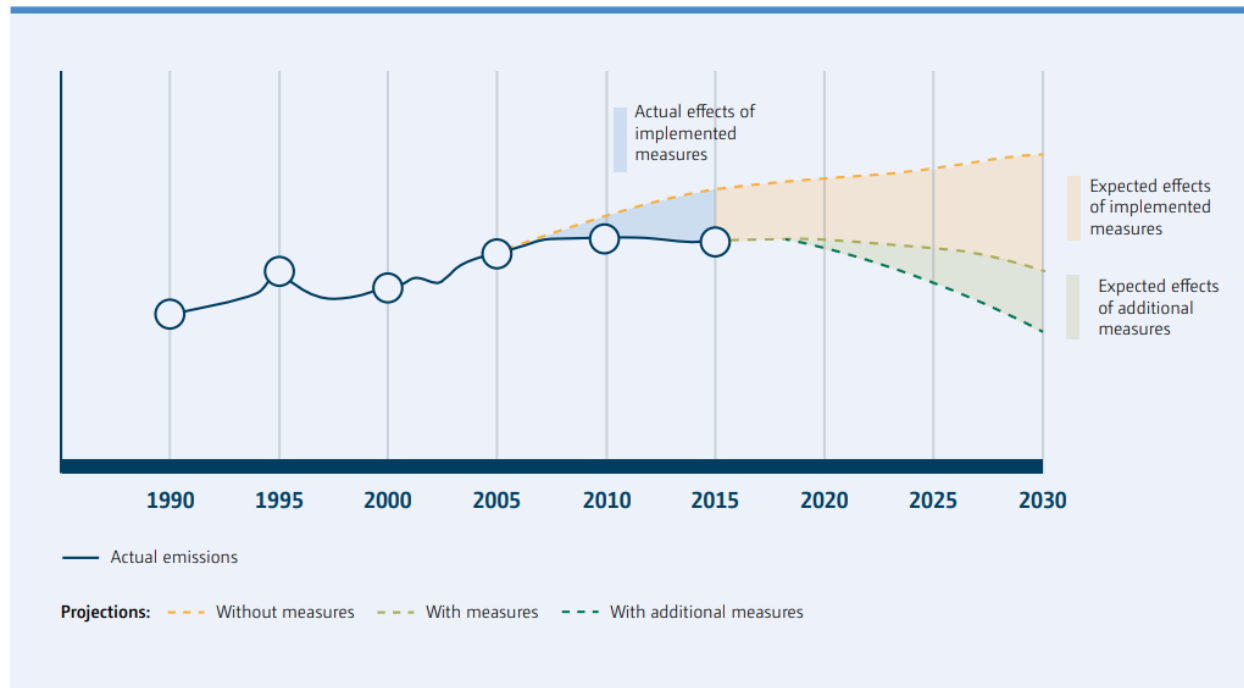
Example of time period for projections of all greenhouse gas emissions and removals, as applicable, including with application of the flexibility provision



Source: UNFCCC Technical Handbook, Figure 8. Available at:

https://unfccc.int/sites/default/files/resource/ETF%20Handbook-Edt2_EN.pdf

Figure 9

Hypothetical projections of greenhouse gas emissions and removals under different scenarios

Source: UNFCCC ETF Technical Handbook, Figure 9. Available at:
https://unfccc.int/sites/default/files/resource/ETF%20Handbook-Edt2_EN.pdf

**Optional Projection Scenarios (per MPG para. 94)**

A Party may also report projections for a “with additional measures” scenario and a “without measures” scenario. The Party do not need to separate these optional scenarios into separate subsections of the textual BTR. However, the distinction between each of the scenarios described in the subsection should be made clear for transparency. (See the “Tips” box below for a description of the projection scenarios.)

**Flexibility Provision**

Developing country Parties that need flexibility in the light of their capacities with respect to the timeframe of projections have the flexibility to instead extend their projections at least to the end point of their NDC (reported above, Section II.B). See Figure 8 in the example box above. For more information on flexibility, refer to Appendix B of this annotated outline, as needed.

**CTF Tables 7–9**

CTF tables 7–9 provide for reporting of projection results for each of the scenarios (note that only the “with measures” scenario is required by the MPGs):

- CTF 7—Information on projections of GHG emissions and removals under a “with measures” scenario
- CTF 8—Information on projections of GHG emissions and removals under a “with additional measures” scenario

- CTF 9—Information on projections of GHG emissions and removals under a “without measures” scenario



Tips

The footnote of MPG para. 94 describes the different projection scenarios:

“A ‘with measures’ scenario encompasses currently implemented and adopted policies and measures. If provided, a ‘with additional measures’ scenario encompasses implemented, adopted and planned policies and measures. If provided, a ‘without measures’ projection excludes all policies and measures implemented, adopted and planned after the year chosen as the starting points for the projection.”

iii. Methodology used to develop projections

MPG

Para. 96

This subsection describes the methodology used to develop projections, which includes a discussion of the models, approaches, and underlying assumptions and parameters used for projections. Where relevant, this subsection also describes any changes in the methodology used for projections from that described in the Party’s previous BTR. The narrative should transparently describe the models and the key underlying assumptions and parameters used. The description should also address the assumptions for policies and measures that are included in the “with measures” projections and “with additional measures” projections (if projections for this latter optional scenario are included). If there are differences in the models, approaches, and underlying assumptions and parameters used for projections under different projection scenarios, these should be transparently described.



CTF Table 11

See CTF 11—Key underlying assumptions and parameters used for projections

iv. Projections of key indicators

MPG

Para. 97

This subsection provides a description of projections for the key indicators that were chosen to track implementation and achievement of the NDC. The description of NDC indicator(s) and their definitions are addressed in subsections II.C.i and ii of this annotated outline for Chapter II. Note that projections of key indicators for NDC tracking progress are distinct from projections of GHG emissions and sinks.



CTF Table 10

See CTF 10—Projections of key indicators

II.G. Other information

MPG

Covers para. 103

This section addresses any other information that is relevant to tracking progress made in implementing and achieving the NDC. The inclusion of such information is encouraged. If there is other information relevant to implementing and achieving the NDC, describe it here.

Appendix A: Modalities, Procedures, and Guidelines (MPGs)

The provisions of the MPGs that are relevant to this annotated outline of BTR Chapter II are presented in this appendix for reference.

Table A-1. Decision 18/CMA.1, Annex I: Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement

MPG Paragraph	MPG Text
I. Introduction	
I.C. Flexibility to those developing country Parties that need it in the light of their capacities	
4	In accordance with Article 13, paragraph 2, of the Paris Agreement, the enhanced transparency framework shall provide flexibility in the implementation of the provisions of Article 13 to those developing country Parties that need it in the light of their capacities, and these MPGs shall reflect such flexibility.
5	These MPGs specify the flexibility that is available to those developing country Parties that need it in the light of their capacities pursuant to Article 13, paragraph 2, reflecting flexibility, including in the scope, frequency and level of detail of reporting, and in the scope of the review, as referred to decision 1/CP.21, paragraph 89.
6	The application of a flexibility provided for in the provisions of these MPGs for those developing country Parties that need it in the light of their capacities is to be self-determined. The developing country Party shall clearly indicate the provision to which flexibility is applied, concisely clarify capacity constraints, noting that some constraints may be relevant to several provisions, and provide self-determined estimated time frames for improvements in relation to those capacity constraints. When a developing country Party applies flexibility provided for in these MPGs, the technical expert review teams shall not review the Party's determination to apply such flexibility or whether the Party possesses the capacity to implement that specific provision without flexibility.
I.E. Reporting format	
10	In the biennial transparency report: (a) Each Party shall provide a national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs), in accordance with the MPGs contained in chapter II below; (b) Each Party shall provide the information necessary to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement, in accordance with the MPGs contained in chapter III below;

MPG Paragraph	MPG Text
	(c) Each Party should provide information on climate change impacts and adaptation under Article 7 of the Paris Agreement, in accordance with the MPGs contained in chapter IV below; (d) Developed country Parties shall provide information pursuant to Article 13, paragraph 9, in accordance with the MPGs contained in chapter V below. Other Parties that provide support should provide such information and, in doing so, are encouraged to use the MPGs contained in chapter V below; (e) Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11 of the Paris Agreement, in accordance with the MPGs contained in chapter VI below.
11	The LDCs and SIDS may submit the information referred to in paragraph 10 above at their discretion.
12	Notwithstanding paragraph 10 above, the national inventory report referred to in paragraph 10 above may be submitted as a stand-alone report or as a component of a biennial transparency report.
13	If a Party submits an adaptation communication as a component of or in conjunction with a biennial transparency report, it should clearly identify which part of the report is the adaptation communication.
14	When reporting information related to climate change impacts and adaptation under Article 7 of the Paris Agreement as referred to in paragraph 10(c) above, a Party may cross-reference previously reported information and focus its reporting on updates to previously reported information.
15	Each Party shall transmit its biennial transparency report, and national inventory report if submitted as a stand-alone report, via an online portal maintained by the secretariat. The secretariat shall post the reports on the UNFCCC website.
16	Each Party shall submit the reports referred to in paragraphs 10 and 12 above in one of the official languages of the United Nations.
II. National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases	
II.D. Metrics	
37	Each Party shall use the 100-year time-horizon global warming potential (GWP) values from the IPCC Fifth Assessment Report, or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO ₂ eq. Each Party may in addition also use other metrics (e.g. global temperature potential) to report supplemental information on aggregate emissions and removals of GHGs, expressed in CO ₂ eq. In such cases, the Party shall provide in the national inventory

MPG Paragraph	MPG Text
	document information on the values of the metrics used and the IPCC assessment report they were sourced from.
II.E. Reporting guidance	
38	Pursuant to Article 13, paragraph 7(a), of the Paris Agreement, each Party shall provide a national inventory report of anthropogenic emissions by sources and removals by sinks of GHGs. The national inventory report consists of a national inventory document and the common reporting tables. Each Party shall report the information referred to in paragraphs 39–46 below, recognizing the associated flexibilities provided for those developing country Parties that need them in the light of their capacities.
III. Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement	
III.A. National circumstances and institutional arrangements	
59	Each Party shall describe its national circumstances relevant to progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement, including: (a) Government structure; (b) Population profile; (c) Geographical profile; (d) Economic profile; (e) Climate profile; (f) Sector details.
60	Each Party shall provide information on how its national circumstances affect GHG emissions and removals over time.
61	Each Party shall provide information on the institutional arrangements in place to track progress made in implementing and achieving its NDC under Article 4, including those used for tracking internationally transferred mitigation outcomes (ITMOs), if applicable, along with any changes in institutional arrangements since its most recent biennial transparency report.
62	Each Party shall provide information on legal, institutional, administrative and procedural arrangements for domestic implementation, monitoring, reporting, archiving of information and stakeholder engagement related to the implementation and achievement of its NDC under Article 4.
63	In reporting the information referred to in paragraphs 59–62 above, a Party may reference previously reported information.

MPG Paragraph	MPG Text
III.B.	Description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates
64	Each Party shall provide a description of its NDC under Article 4, against which progress will be tracked. The information provided shall include the following, as applicable, including any updates to information previously provided: (a) Target(s) and description, including target type(s) (e.g. economy-wide absolute emission reduction, emission intensity reduction, emission reduction below a projected baseline, mitigation co-benefits of adaptation actions or economic diversification plans, policies and measures, and other); (b) Target year(s) or period(s), and whether they are single-year or multi-year target(s); (c) Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s); (d) Time frame(s) and/or periods for implementation; (e) Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases; (f) Intention to use cooperative approaches that involve the use of ITMOs under Article 6 towards NDCs under Article 4 of the Paris Agreement; (g) Any updates or clarifications of previously reported information (e.g. recalculation of previously reported inventory data, or greater detail on methodologies or use of cooperative approaches).
III.C.	Information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4 of the Paris Agreement
70	For the first biennial transparency report that contains information on the end year or end of the period of its NDC under Article 4, each Party shall provide an assessment of whether it has achieved the target(s) for its NDC under Article 4 based on the relevant information described in paragraphs 59–69 above and paragraph 78 below, as applicable, and the most recent information for each selected indicator relevant to tracking progress towards the implementation and achievement of its NDC under Article 4.
71	For the first NDC under Article 4, each Party shall clearly indicate and report its accounting approach, including how it is consistent with Article 4, paragraphs 13 and 14, of the Paris Agreement. Each Party may choose to provide information on accounting of its first NDC consistent with decision 4/CMA.1.
72	For the second and subsequent NDC under Article 4, each Party shall provide information referred to in chapter III.B and C above consistent with decision 4/CMA.1. Each Party shall clearly indicate how its reporting is consistent with decision 4/CMA.1.
73	Each Party shall provide any definitions needed to understand its NDC under Article 4, including those related to each indicator identified in paragraph 65 above, those related to any sectors or

MPG Paragraph	MPG Text
	categories defined differently than in the national inventory report, or the mitigation co-benefits of adaptation actions and/or economic diversification plans.
74	Each Party shall provide a description of each methodology and/or accounting approach used, as applicable for: (a) Target(s), as described in paragraph 64 above; (b) The construction of baselines, as described in paragraph 64 above, to the extent possible; (c) Each indicator identified in paragraph 65 above.
75	The information referred to in paragraph 74 above shall include, as applicable and available to the Party's NDC under Article 4: (a) Key parameters, assumptions, definitions, data sources and models used; (b) IPCC guidelines used; (c) Metrics used; (d) Where applicable to its NDC, any sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, taking into account any relevant decision under the Convention, including as applicable: (i) The approach used to address emissions and subsequent removals from natural disturbances on managed lands; (ii) The approach used to account for emissions and removals from harvested wood products; (iii) The approach used to address the effects of age-class structure in forests; (e) Methodologies used to estimate mitigation co-benefits of adaptation actions and/or economic diversification plans; (f) Methodologies associated with any cooperative approaches that involve the use of internationally transferred mitigation outcomes towards its NDC under Article 4, consistent with CMA guidance on cooperative approaches under Article 6; (g) Methodologies used to track progress arising from the implementation of policies and measures; (h) Any other methodologies related to its NDC under Article 4; (i) Any conditions and assumptions relevant to the achievement of its NDC under Article 4.
76	Each Party shall also: (a) Describe, for each indicator identified in paragraph 65 above, how it is related to its NDC under Article 4; (b) Explain how the methodology in each reporting year is consistent with the methodology or methodologies used when communicating the NDC;

MPG Paragraph	MPG Text
	(c) Explain methodological inconsistencies with its most recent national inventory report, if applicable; (d) Describe how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed in relation to Article 6, if relevant.
77	Each Party shall provide the information referred to in paragraphs 65–76 above in a structured summary to track progress made in implementing and achieving its NDC under Article 4, including: (a) For each selected indicator: (i) Information for the reference point(s), level(s), baseline(s), base year(s), or starting point(s) referred to in paragraph 67 above; (ii) Information for previous reporting years during the implementation period of its NDC under Article 4, identified in paragraph 68 above, as applicable; (iii) The most recent information identified in paragraph 68 above; (b) Where applicable, information on GHG emissions and removals consistent with the coverage of its NDC under Article 4; (c) Contribution from the LULUCF sector for each year of the target period or target year, if not included in the inventory time series of total net GHG emissions and removals, as applicable; (d) Each Party that participates in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards an NDC under Article 4, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of its NDC, shall also provide the following information in the structured summary consistently with relevant decisions adopted by the CMA on Article 6: (i) The annual level of anthropogenic emissions by sources and removals by sinks covered by the NDC on an annual basis reported biennially; (ii) An emissions balance reflecting the level of anthropogenic emissions by sources and removals by sinks covered by its NDC adjusted on the basis of corresponding adjustments undertaken by effecting an addition for internationally transferred mitigation outcomes first-transferred/transferred and a subtraction for internationally transferred mitigation outcomes used/acquired, consistent with decisions adopted by the CMA on Article 6; (iii) Any other information consistent with decisions adopted by the CMA on reporting under Article 6; (iv) Information on how each cooperative approach promotes sustainable development; and ensures environmental integrity and transparency, including in governance; and applies robust accounting to ensure inter alia the avoidance of double counting, consistent with decisions adopted by the CMA on Article 6.

MPG Paragraph	MPG Text
78	Each Party with an NDC under Article 4 that consists of adaptation actions and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement shall provide the information necessary to track progress on the implementation and achievement of the domestic policies and measures implemented to address the social and economic consequences of response measures, including: (a) Sectors and activities associated with the response measures; (b) Social and economic consequences of the response measures; (c) Challenges in and barriers to addressing the consequences; (d) Actions to address the consequences.
79	Each Party shall report the information referred to in paragraphs 65–78 above in a narrative and common tabular format, as applicable. Such common tabular formats should accommodate all types of NDC under Article 4, as appropriate.
III.D.	Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a national determined contribution under Article 4 of the Paris Agreement
90	Each Party is encouraged to provide detailed information, to the extent possible, on the assessment of economic and social impacts of response measures.
III.F.	Projections of greenhouse gas emissions and removals, as applicable
92	Each Party shall report projections pursuant to paragraphs 93–101 below; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report these projections.
93	Projections are indicative of the impact of mitigation policies and measures on future trends in GHG emissions and removals, and shall not be used to assess progress towards the implementation and achievement of a Party's NDC under Article 4 of the Paris Agreement unless the Party has identified a reported projection as its baseline as identified in chapter III.B above.
94	Each Party that reports pursuant to paragraph 92 above shall report a “with measures” projection of all GHG emissions and removals and may report a “with additional measures” projection and a “without measures” projection.⁷
95	Projections shall begin from the most recent year in the Party's national inventory report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the

⁷ A “with measures” scenario encompasses currently implemented and adopted policies and measures. If provided, a “with additional measures” scenario encompasses implemented, adopted and planned policies and measures. If provided, a “without measures” projection excludes all policies and measures implemented, adopted and planned after the year chosen as the starting points for the projection.

MPG Paragraph	MPG Text
	flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement.
96	Each Party should provide information in describing the methodology used to develop the projections. This information should include: (a) Models and/or approaches used and key underlying assumptions and parameters used for projections (e.g. gross domestic product growth rate/level, population growth rate/level); (b) Changes in the methodology since the Party's most recent biennial transparency report; (c) Assumptions on policies and measures included in the "with measures" projections and "with additional measures" projections, if included; (d) Sensitivity analysis for any of the projections, together with a brief explanation of the methodologies and parameters used.
99	Projections shall be presented relative to actual inventory data for the preceding years.
100	Emission projections shall be provided with and without LULUCF.
101	Projections shall be presented in graphical and tabular formats.
102	Those developing country Parties that need flexibility in the light of their capacities with respect to paragraphs 93–101 above can instead report using a less detailed methodology or coverage.

Appendix B: Flexibility for Developing Countries That Need It in Light of Their Capacities

What do flexibility provisions address? Flexibility provisions may be used to address the scope, frequency, and level of detail of certain reporting requirements for aspects of the BTR. A developing country that needs flexibility in the light of its capacity and that is using specific flexibility provisions is required to:

- Clearly indicate the provision to which flexibility is applied,
- Concisely clarify capacity constraints, noting that some constraints may be relevant to several provisions, and
- Provide self-determined estimated time frames for improvements in relation to those capacity constraints.

Parties should indicate and document their use of a flexibility provision; in the CRT and/or CTF the notation key “FX” is used to indicate the use of a flexibility provision.

Who does flexibility apply to? Flexibility is available to those developing countries that need it in the light of their capacities. The decision of whether application of available flexibility is necessary is self-determined by developing countries who elect to apply it. An expert review team cannot review the Party’s determination to apply a specific flexibility provision. Documentation of flexibility provisions applied in a BTR is required but also allows developing countries to highlight their capacity building needs.⁸ This is reflected in the Annex to Decision 18/CMA.1 (MPG para. 6).⁹

How does flexibility apply to this annotated outline? The reporting guidelines for the BTR components listed above specify flexibility provisions for reporting the following information:

- Estimates for expected and achieved GHG emission reductions for PAMs (MPG para. 85)
- Projections of GHG emissions and removals (MPG para. 92)
- Timeframe for projections of GHG emissions and removals (MPG para. 95)
- Methodology or coverage for projections of GHG emissions or removals (MPG para. 102)

⁸ Summary of flexibility is provided in the frequently asked questions: https://unfccc.int/FAQ-moving-towards-the-ETF#_Cross-Cutting-Issues-Flexibility-and-Discretion

⁹ Within this annotated outline, the descriptive MPG text for paragraph 6 is provided in Appendix A of this annotated outline.

Appendix C: Optional Organization for Projections Information in Section II.F

Example outline for projections organization

As indicated in Section II.F of the annotated outline, the projections discussion could be split into separate sections to increase transparency. The following is an example of how one could organize this information. Reference MPG paras. 92–102 to ensure all reporting requirements are met.

1. National projections

The Party shall present a textual summary of projection results and a summary table (e.g., Figure 3.26 which includes information in a tabular format) and an associated figure(s) or graph(s) (e.g., Table 1.3) to provide a national-level summary of projections results for the following scenarios:

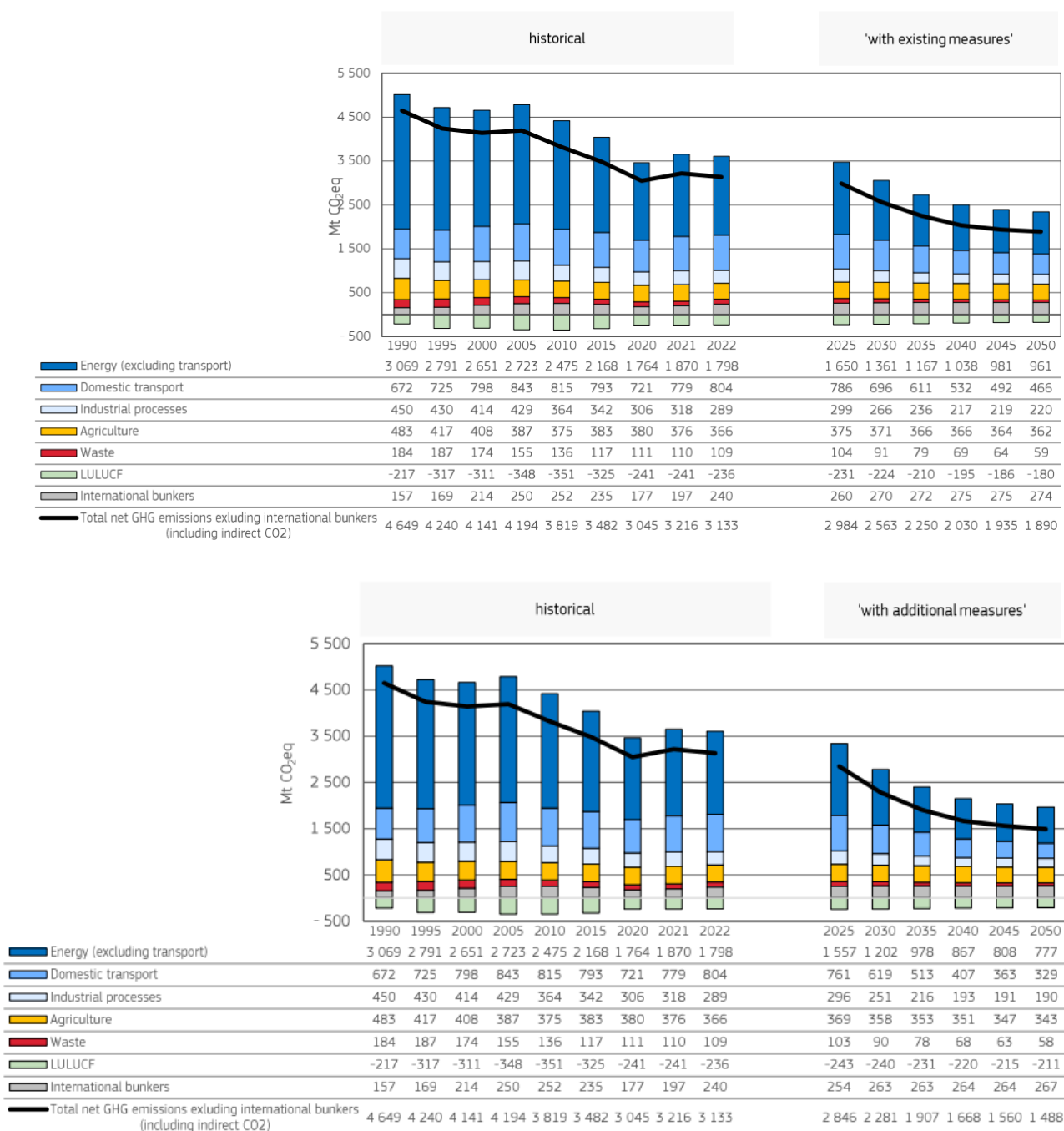
- a. With measures scenario (mandatory)
- b. Without measures scenario (if included, as this scenario is optional)
- c. With additional measures scenario (if included, as this scenario is optional)

Describe the overall projections method, including:

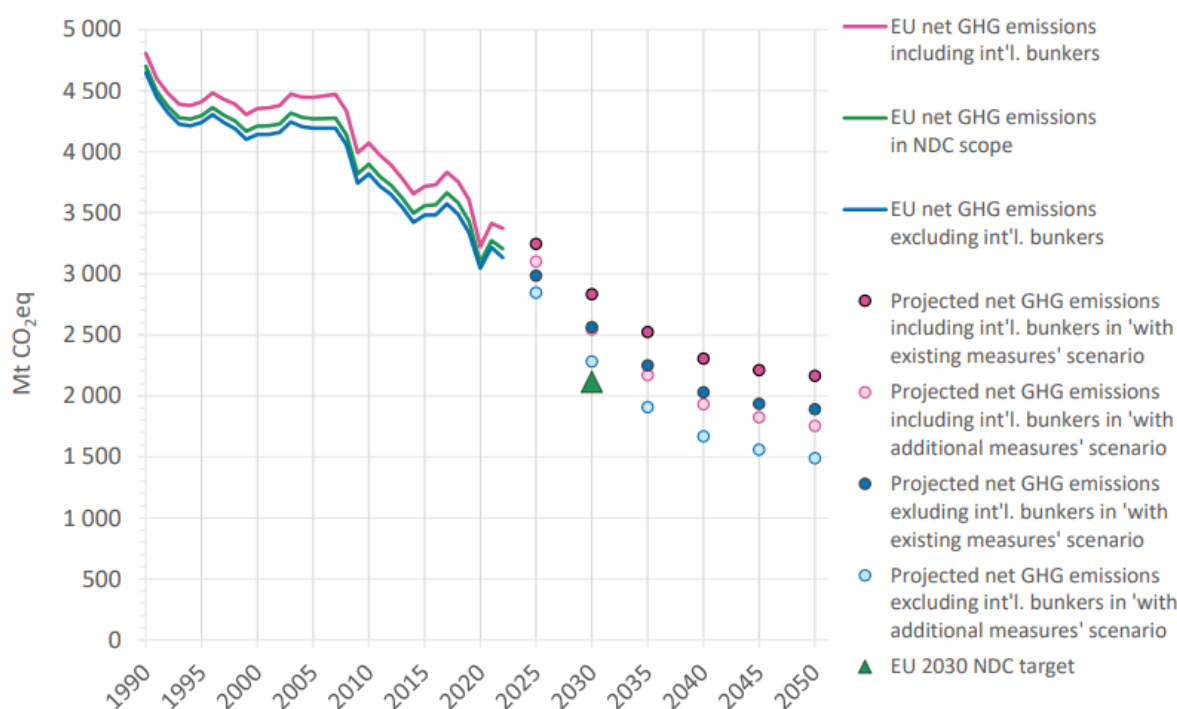
- Description of any models or approaches used, including key underlying assumptions
- Changes to the method or key assumptions since the last BTR (if applicable)
- Assumptions for scenarios (e.g., “with measures”), such as the policies and measures included in the scenario
- Description of any sensitivity analysis conducted

[Example figures are provided below, from the European Union’s BTR1]

Figure 3.26: Historical and projected GHG emissions and removals by sector – ‘with existing measures’ and ‘with additional measures’



Source: Figure 3.26, First Biennial Transparency Report from the European Union (2024). Available at: <https://unfccc.int/sites/default/files/resource/EU%20FIRST%20BTR.pdf>

Figure 1.3: Historical and projected total net GHG emissions in the EU

Source: Figure 1.3, First Biennial Transparency Report from the European Union (2024). Available at:

<https://unfccc.int/sites/default/files/resource/EU%20FIRST%20BTR.pdf>

2. Energy sector projections

For each scenario (with measures, with additional measures, without measures):

- Present a sector-specific textual summary of projection results along with a summary table(s) [e.g., examples of tables are provided below from Lithuania's BTR; Table 2-33 ("with measures") and Table 2-34 ("with additional measures")] and an associated figure(s) or graph(s) that includes the sector and its applicable gases.

Table 2-33. Projected GHG emissions from energy subsectors, kt CO₂ eq.

Sector	2021	2025	2030	2035	2040	2045	2050
Public Electricity and Heat Production	1,529	1,301	1,223	1,308	1,308	1,306	1,306
Petroleum Refining	1,212	1,291	1,186	1,186	1,186	1,186	1,186
Manufacture of Solid Fuels and Other Energy Industries	43	28	27	28	28	28	28
Manufacturing industries and construction	1,275	1,054	667	541	525	512	497
Commercial/Institutional	303	238	166	168	167	166	166
Residential	1,015	905	798	847	834	832	830
Agriculture/Forestry/Fishing	256	261	225	226	227	228	229
Other	27	27	27	27	27	27	27
Fugitive emissions from fuels	488	555	538	538	538	538	538

Table 2-34. Projected GHG emissions from energy sector (kt CO₂ eq.)

	2021	2025	2030	2035	2040	2045	2050
Public Electricity and Heat Production	1,529	1,283	955	955	955	953	953
Petroleum Refining	1,212	1,265	1,112	1,112	1,112	1,112	1,112
Manufacture of Solid Fuels and Other Energy Industries	43	28	25	25	25	25	25
Manufacturing industries	1,275	1,023	434	407	391	378	364
Commercial/Institutional	303	238	156	167	166	165	165
Residential	1,015	905	790	814	800	798	796
Agriculture/Forestry/Fishing	256	261	223	224	225	226	227
Other	27	27	27	27	27	27	27
Fugitive emissions from fuels	488	555	186	189	189	189	189

Source: Tables 2-33 and 2-34, Lithuania's First Biennial Transparency Report under the Paris Agreement (2024).

Available at: https://unfccc.int/sites/default/files/resource/LT_1BTR_final.pdf

- b. Describe the sector-specific projections methodology (provide any relevant sector-specific information not described above in the description of the method used for the overall national projections), including:
 - i. Description of any models or approaches used, including key underlying assumptions
 - ii. Changes to the method or key assumptions since the last BTR (if applicable)
 - iii. Assumptions for scenarios (e.g., "with measures"), such as the policies and measures included in the scenario
 - iv. Description of any sensitivity analysis conducted
- c. Provide projections of key indicators for the sector

[In this example organization structure, the subsequent sections would then present IPPU, Agriculture, LULUCF, and Waste sector projections, mirroring the information provided for Energy, as applicable to the sector and to the extent possible.]

Appendix D: List of Abbreviations, Acronyms, and Chemical Formulae

AFOLU	agriculture, forestry, and other land use
BAU	business as usual
BTR	biennial transparency report
CBIT-GSP	Capacity-building Initiative for Transparency—Global Support Programme
CGE	Consultative Group of Experts
CH ₄	methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO ₂	carbon dioxide
CO ₂ -eq	carbon dioxide equivalents
CTF	common tabular format
ETF	enhanced transparency framework (under the Paris Agreement)
GHG	greenhouse gas
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and products use
ITMO	internationally transferred mitigation outcome
kt	kilotons
LULUCF	land use, land-use change and forestry
MPGs	modalities, procedures, and guidelines
NC	national communications
NDC	nationally determined contribution
NF ₃	nitrogen trifluoride
NID	national inventory document
NIR	national inventory report
PA	Paris Agreement
PAMs	policies and measures
para	paragraph (referencing the MPGs)
PATPA	Partnership on Transparency in the Paris Agreement
PFCs	perfluorinated compounds
SF ₆	sulfur hexafluoride
TACCC	transparency, accuracy, completeness, comparability, consistency
UNFCCC	United Nations Framework Convention on Climate Change
WAM	“with additional measures”
WEM	“with measures”
WOM	“without measures”