

Kenya training on the preparation of national GHG inventories under the ETF of the Paris Agreement: introductory webinar

Part 1: 08 March 2024

Presentation: Introduction to
the new requirements for
reporting national GHG
inventories under the Paris
Agreement (MPGs) and
associated flexibility provisions

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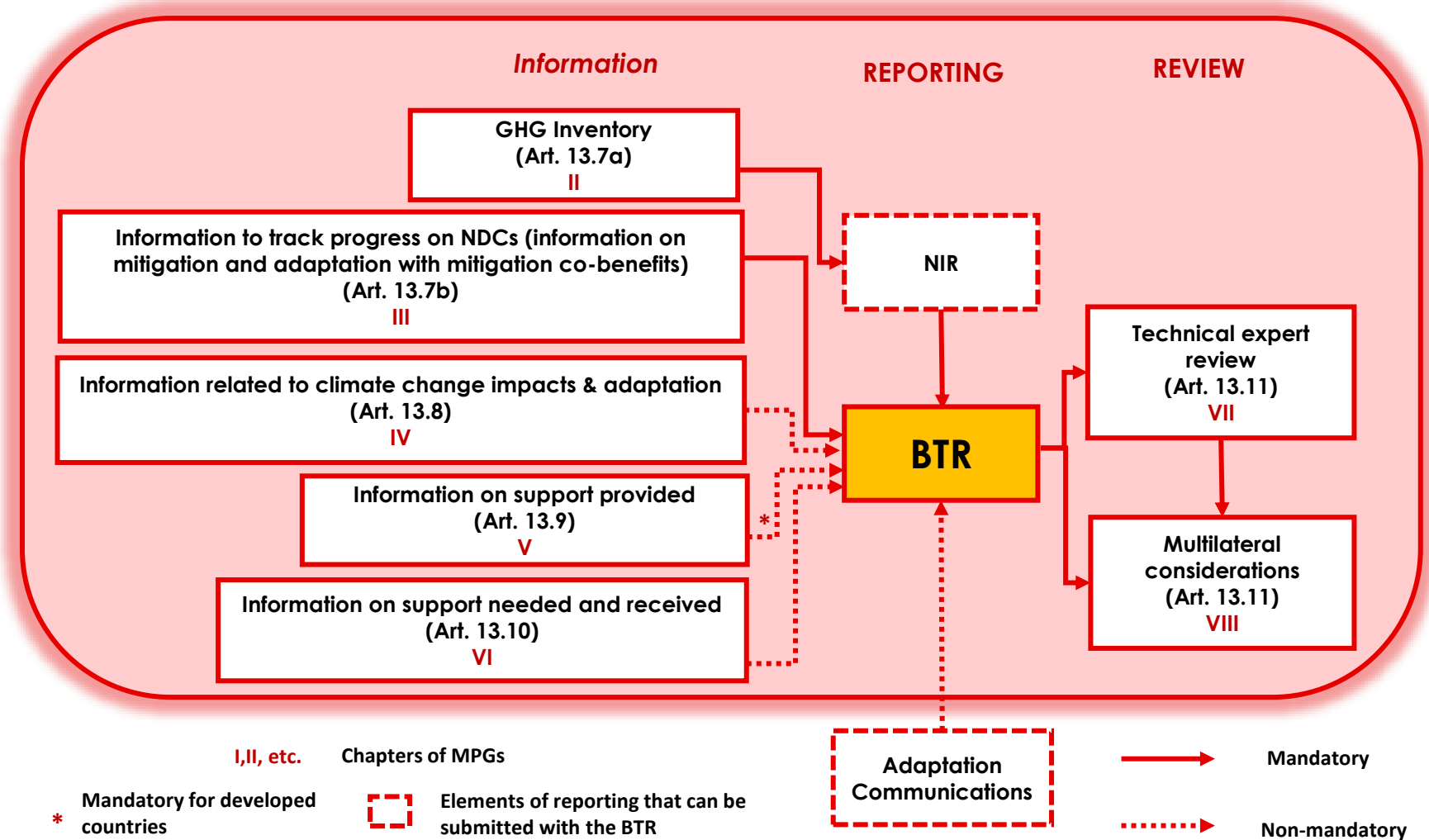
UNEP Copenhagen Climate Centre

Relevance of GHG inventories under the ETF

The two key elements of information crucial to **evaluating progress** towards achieving Parties' individual nationally determined contributions (NDCs) and making the necessary course corrections are:

- 1) National **GHG emissions inventories**, providing an overview of the **current status** of the emissions of a given country; and,
- 2) **Projected** GHG emissions as communicated by Parties.

Reorganization of information for submission to the UNFCCC



Reporting the National GHG Inventory under the ETF

- Each Party shall provide a national inventory report (NIR) of anthropogenic emissions by sources and removals by sinks of GHGs
- NIR may be submitted as a **stand-alone report** or as a **component of a BTR**
- The submission includes the National Inventory Document (**NID**) and the common reporting tables (**CRTs**) for the electronic reporting of the national inventory report
- The CRT are submitted electronically and considered part of the submission, so tables do not need to be reproduced in the BTR itself
- Parties are encouraged to follow the **NID outline** (Decision 5/CMA.3, annex IV), but it is not mandatory
- For those developing country parties that need **flexibility** in the light of their capacities, specific flexibility provisions may be applied. In this case you may use the “flex summary table” in the CRTs

Flexibility in the presentation of GHG inventories

Flexibility for developing countries:

- Self-determined
- Need for flexibility shall be specifically explained
- Plans and time frames for how to meet the full requirements shall be drawn up
- Aiming for a continuous enhancement of the quality over time

The GHG Inventory is the area of the MPGs with more flexibility provisions:

Topics with flexibility:

- Key category analysis (para.25)
- Uncertainty assessment (para.29)
- Use of the notation key “NE” (para.32)
- QA/QC (para.34 and 35)
- Gases (para.48)
- Time-series (para.57)
- Reporting year (para.58)

Outline of a National Inventory Document: Main contents

Executive Summary

- Chapter 1. National circumstances, institutional arrangements, and cross-cutting information
- Chapter 2. Trends in greenhouse gas emissions and removals
- Chapter 3. Energy (crt sector 1)
- Chapter 4. Industrial processes and product use (crt sector 2)
- Chapter 5. Agriculture (crt sector 3)
- Chapter 6. Land use, land-use change and forestry (crt sector 4)
- Chapter 7. Waste (crt sector 5)
- Chapter 8. Other sector (crt sector 6)
- Chapter 9. Indirect CO₂ and N₂O emissions
- Chapter 10. Recalculations and improvements

Outline of a National Inventory Document: Annexes

- Annex i: key categories
- Annex ii: uncertainty assessment
- Annex iii: detailed description of the reference approach (energy sector)
- Annex iv: quality assurance and quality control plan
- Annex v: any additional information, as applicable, including detailed methodological description of source or sink categories and the national emission balance
- Annex vi: common reporting tables: Energy, Industrial processes and product use, Agriculture, Land use, land-use change and forestry, Waste, Other substances that affect the climate.
- References

Source: Decision 5/CMA.3 annex V

Common Reporting Tables (CRT)

The CRT include 61 tables to fill:

- Summary report tables
- Sectoral report tables
- Background data tables
- Cross-sectoral tables
- Other tables

<https://unfccc.int/documents/311076>

| | | |
|--|-----------------------------|------------------------------|
| Abbreviations and acronyms | Table3 | Summary1 |
| Table1 | Table3.A | Summary2 |
| Table1.A(a)s1 | Table3.B(a) | Summary3 |
| Table1.A(a)s2 | Table3.B(b) | Table6 |
| Table1.A(a)s3 | Table3.C | Table7 |
| Table1.A(a)s4 | Table3.D | Table8s1 |
| Table1.A(b) | Table3.E | Table8s2 |
| Table1.A(c) | Table3.F | Table9 |
| Table1.A(d) | Table3.G-J | Table10s1 |
| Table1.B.1 | Table4 | Table10s2 |
| Table1.B.2 | Table4.1 | Table10s3 |
| Table1.C | Table4.A | Table10s4 |
| Table1.D | Table4.B | Table10s5 |
| Table2(I) | Table4.C | Table10s6 |
| Table2(I).A-H | Table4.D | Flex_Summary |
| Table2(II) | Table4.E | |
| Table2(II)B-Hs1 | Table4.F | |
| Table2(II)B-Hs2 | Table4(I) | |
| | Table4(II) | |
| | Table4(III) | |
| | Table4(IV) | |
| | Table4.Gs1 | |
| | Table4.Gs2 | |
| | Table5 | |
| | Table5.A | |
| | Table5.B | |
| | Table5.C | |
| | Table5.D | |

Structure of the MPGs

Introduction, purpose, principles of MPGs, clarifications on flexibility, improved reporting over time and reporting format



- I. **National inventory report (NIR)** of greenhouse gases (GHGs)
- II. Information necessary to **track progress** made in implementing and achieving **NDCs**
- III. Information related to **climate change impacts and adaptation**
- IV. Information **support provided and mobilized** (Developed countries)
- V. Information on **support needed and received**
- VI. MPG for technical expert **review**
- VII. MPG for the facilitative, multilateral **consideration of progress** (FMCP)

| Contents to be included in the NIR according to the MPGs | Topics covered |
|---|--|
| Inventory reporting and information to be reported | Submission requirements Reporting form Inclusion of national circumstances and institutional arrangements |
| Methods to be used: methodologies, parameters, and data | IPCC guidelines, nationally appropriate methodologies, tiers and country specific EF and AD, KC analysis, time-series consistency and recalculations, uncertainty assessment, metrics, insignificant categories, QA/QC |
| Information to be reported: methods and cross-cutting elements | Information on methods and data, assessment of completeness |
| Information to be reported: time-series, sectors and gases | time-series, sectors and gases |

National Inventory Report (NIR)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|---|--|--|
| Inventory reporting and information to be reported: MPG: 38, 12, 17, 18, 19, 47, 58 | | |
| Submission requirements | <ul style="list-style-type: none"> Developing countries should submit updates of national GHG inventories including a national inventory report | <ul style="list-style-type: none"> Each Party shall provide a national inventory report Latest reporting year shall be no more than 2 years prior to the submission of the NIR (3 years prior to the submission if flexibility is needed) |
| Reporting form | <ul style="list-style-type: none"> Reporting GHG Inventory | <ul style="list-style-type: none"> National Inventory Document (NID) Common Reporting Tables (CRT) |
| National circumstances | <ul style="list-style-type: none"> <i>Describe procedures and arrangements to collect data and information on the role of the institutions involved</i> | Provide information on national circumstances and institutional, legal and procedural arrangements: <ul style="list-style-type: none"> National entity or national focal point The inventory preparation process The archiving of all information for the reported time-series The processes in place for the official consideration and approval of the inventory |

National Inventory Report (NIR)

Source: adapted from ICAT-UNEPDTU (2019)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|--|---|--|
| Information to be reported: sectors and gases MPG: 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 | | |
| Time series | <ul style="list-style-type: none"> Encouraged to provide time series back to the years reported in the previous NC. (in NC, no time series but inventories for the year 1994/1990, for first NC, and 2000 for second NC) | <ul style="list-style-type: none"> Time series shall start from 1990 (as a minimum the reference years for the respective NDC and a consistent annual time series from at least 2020 onwards, if flexibility is needed) |
| Gases | <ul style="list-style-type: none"> CO₂, CH₄, and N₂O HFCs, PFCs, SF₆, CO, NO_x, NMVOC, and SO_x. Provide emissions and removals on a gas-by-gas basis and in units of mass | <ul style="list-style-type: none"> CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃ (flexibility to report at least first three and not the gases in blue) CO, NMVOCs, SO_x, NO_x, indirect CO₂ from atmospheric oxidation of CH₄, CO and NMVOCs (should) |
| Sectors | <ul style="list-style-type: none"> Energy Industrial Processes and Solvent and Other Product Use Agriculture LULUCF Waste (IPCC 1996) | <ul style="list-style-type: none"> Energy Industrial Processes and Product Use Agriculture LULUCF Waste (IPCC 2006) |

In italics: "should", "encouraged" and "may" requirements. In blue: requirements where flexibility applies.

National Inventory Report (NIR)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|--|--|---|
| <p>Methods to be used: methodologies, parameters and data MPG: 20, 22, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37</p> | | |
| <p>IPCC guidelines</p> | <ul style="list-style-type: none"> Use IPCC revised guidelines 1996, IPCC GPG 2000 and IPCC 2003 GPG for LULUCF | <ul style="list-style-type: none"> Use IPCC Guidelines 2006, and any subsequent version or refinement |
| <p>Nationally appropriate methodologies</p> | | <ul style="list-style-type: none"> A Party should use nationally appropriate methodologies if they better reflect its national circumstances and are consistent with the IPCC guidelines |
| <p>Tiers and country-specific EF and AD</p> | | <ul style="list-style-type: none"> Each Party should make every effort to use a recommended method (tier level) for key categories, otherwise may use a Tier 1 approach, but shall clearly document it Parties are encouraged to use country-specific and regional EF and AD, where available, or to propose plans to develop such EF and AD in accordance with the IPCC guidelines |
| <p>KC Analysis</p> | | <ul style="list-style-type: none"> Identify key categories with threshold at 95% (85% if flexibility is needed) Describe KC including information on the approach used for their identification Report individual and cumulative % contributions (level and trend) |

In italics: "should", "encouraged" and "may" requirements. In blue: requirements where flexibility applies.

National Inventory Report (NIR)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|--|--|--|
| <p>Methods to be used: methodologies, parameters and data MPG: 20, 22, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 43, 45</p> | | |
| <p>QA/QC</p> | <ul style="list-style-type: none"> <i>Encouraged to apply the IPCC Good Practice Guidance</i> | <ul style="list-style-type: none"> Each Party shall elaborate an inventory quality assurance/quality control (QA/QC) plan and shall implement and provide info on QC procedures following IPCC guidelines (If flexibility is needed this provision is only encouraged). Report QA/QC procedures already implemented or to be implemented in the future |
| <p>Metrics</p> | <ul style="list-style-type: none"> <i>should use the GWP using the 100-year time horizon and CO_{2e} for aggregated</i> | <ul style="list-style-type: none"> Use the 100-year time-horizon GWP to report aggregate emissions and removals of GHGs, expressed in CO_{2e} |

National Inventory Report (NIR)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|---|---|--|
| Methods to be used: methodologies, parameters and data. MPG: 20, 22, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 43, 45 | | |
| Consistency and recalculations | | <ul style="list-style-type: none"> • The same methods and approach to underlying AD and EF should be used consistently for each reported year • If missing emission values resulting from a lack of AD, EF or other parameters, IPCC splicing techniques should be used • If changes in the methods/assumptions, important to recalculate the complete time-series to not affect emission trends |
| Uncertainty assessment | <ul style="list-style-type: none"> • <i>Encouraged to provide information on the level of uncertainty, and to describe the methodologies used, if any, for estimating these uncertainties.</i> | <ul style="list-style-type: none"> • Uncertainty for all source and sink categories shall be quantitatively estimated and qualitatively discussed, at least the starting year and the latest reporting year of the inventory time series. (Qualitative analysis where quantitative data is unavailable if flexibility is needed) |
| Insignificant categories | <ul style="list-style-type: none"> • <i>Encouraged to apply the IPCC Good Practice Guidance</i> | <ul style="list-style-type: none"> • NE (Not Estimated) if emissions from a is considered insignificant: likely level of emissions is below 0.05% of the national total GHG emissions, excluding LULUCF and 500 kt CO₂ eq, whichever is lower. Total national aggregate of estimated emissions for all gases from categories considered insignificant shall remain below 0.1% of the national total GHG emissions, excluding LULUCF. (If flexibility is needed all numbers x2) |

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National Inventory Report (NIR)

| Detail | NIR (part of BUR) | NIR (part of BTR or stand alone) |
|---|-------------------|---|
| Information to be reported: methods and cross-cutting elements MPG: 39, 40, 41, 42, 44, 46 | | |
| Information on methods | | <ul style="list-style-type: none"> • Report on methods used, including rationale for selection of these methods • Information on EF and AD used at the most disaggregated level, to the extent possible |
| Lack of completeness | | <ul style="list-style-type: none"> • If some IPCC sources/sinks are not considered, the Party should clearly indicate the main explain reasons for exclusion • Notation Keys must be used where numerical data are not available • Once emissions have been estimated for a category, these must be reported in subsequent submissions if they continue to occur • Report information on reasons for a lack of completeness, including information on any methodological or data gaps |
| QA/QC | | <ul style="list-style-type: none"> • Report QA/QC procedures already implemented or to be implemented in the future |

In italics: "should", "encouraged" and "may" requirements. In blue: requirements where flexibility applies.

Thank you for your attention!

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