TRANSPARENCY UNDER THE PARIS AGREEMENT

Key GHG Inventory Reporting Requirements under the Enhanced Transparency Framework of the Paris Agreement

Remote Training on the IPCC Inventory Software for National GHG Inventories for the African Region, 19 – 22 April 2022

United Nations
Climate Change Secretariat

Sabin Guendehou,
Programme Officer

National GHG Inventory – TACCC principles

United Nations
Climate Change Secretariat

Transparency

Documentation is sufficiently clear such that individuals or groups other than the inventory compilers can understand how the inventory was compiled be certain it meets IPCC good practice requirements.

Accuracy

The GHG inventory contains neither over- nor under-estimates so far as can be Judged; all endeavors made to remove bias from the inventory estimates.

Consistency

Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions.

Completeness

Estimates are reported for all relevant categories and gases in the relevant geographic area.

Missing categories are clearly documented together with a justification for exclusion.

Comparability

The GHG inventory is reported in a way that allows it to be compared with inventories for other countries.

For a full definition of the IPCC principles, see 2006 IPCC Guidelines, vol. 1, chap. 1, section 1.4.

Key changes in national GHG inventory reporting for developing countries

United Nations
Climate Change Secretariat

BUR

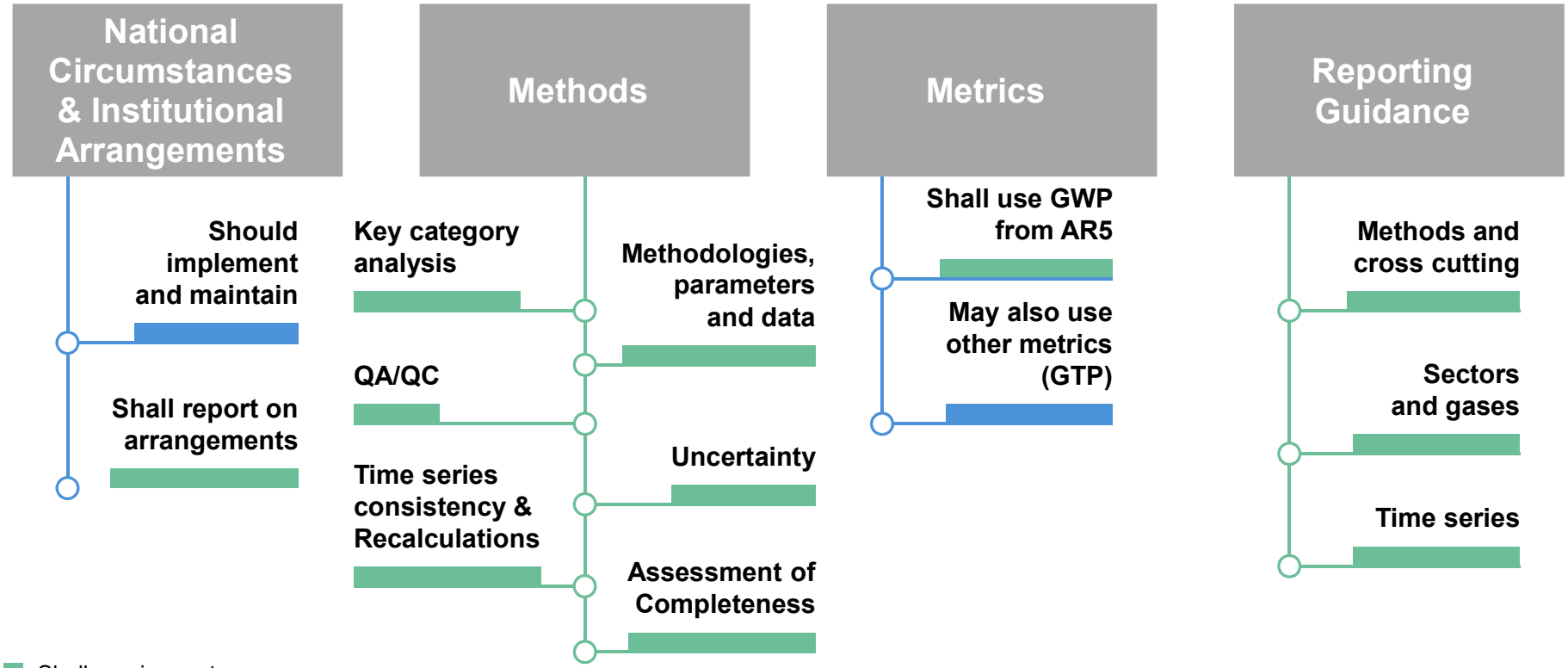
- Use of 1996 IPCC Guidelines
- Cover inventory year T-4
- Activity data should be updated
- Reporting at a summary level
- Key category analysis should be done
- Limited reporting on institutional arrangements (e.g. archiving, inventory as a continuous process). No specific requirements on QA/QC
- Shall report CO_2, CH_4 and N_2O (using SAR values); encouraged to report other gases
- Should quantitively estimate uncertainty

BTR

- Parties shall submit 1st BTR at the latest 31 December 2024 (18/CMA.1)
- Use of the 2006 IPCC Guidelines
- Cover year T-2 (T-3 with flexibility*)
- Recalculations of previous data required
- Reporting tables (CRT, CTF) adopted at COP 26 (decision 5/CMA.3) – (NIR = NID + CRT)
- Key category analysis required (with flexibility*)
- Reporting on institutional arrangements required (e.g. planning, preparation and management).
- Shall develop a QA/QC plan (with flexibility*)
- Shall report basket of 7 gases (with flexibility*), using AR5 GWP values
- Shall quantitatively estimate uncertainty (with flexibility*)

National inventory report - overview

United Nations
Climate Change Secretariat



National GHG inventory - elements

United Nations
Climate Change Secretariat

Methods/Guidelines

- Parties shall use the *2006 IPCC Guidelines*, along with any subsequent version/refinement agreed upon by the CMA.
- Parties encouraged to apply the *2013 Wetlands Supplement*.
- Parties may use on a voluntary basis the *2019 Refinement to the 2006 IPCC Guidelines.*
- Countries should make every effort to use a recommended method for key categories.
- Energy, IPPU, AFOLU, Waste.
- Use global warming potential values from AR5.

Gases

- Shall: CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF3 (with flexibility).
- Should: pre-cursor gases (CO, NOx, NMVOCs and SO_2).
- May report indirect CO_2 from atmospheric oxidation of CH_4, CO and NMVOCs; if choose to, report total GHG emissions with and without indirect CO_2.
- Should report indirect N_2O other than ag/LULUCF as a memo item (not included in national totals).
- May report other substances that have an impact on climate.

Time series

- Shall: report consistent time series from 1990 (with flexibility).
- Shall: Latest reporting year no more than 2 years prior to the submission year (with flexibility).

National GHG inventory - elements

United Nations
Climate Change Secretariat

Key category analysis

- Shall identify key categories for starting year and latest reporting year, incl. and excl. LULUCF, using approach 1, for both level and trend assessment – generally use higher tier methods for key categories (with flexibility – to identify KC using a threshold no lower than 85% in place of 95%)

Time series consistency & recalculations

- Should use the same methods over time, as well as approach to AD and EFs
- Should use IPCC splicing techniques to fill in gaps in time series
- Shall perform recalculations in accordance with IPCC Guidelines

Uncertainty Assessment

- Shall quantitatively estimate uncertainty and qualitatively discuss uncertainty for emission, removal estimates for all source and sink categories, including inventory totals for at least the starting year and latest year
- Shall also estimate the trend uncertainty – use at least approach 1.
- Flexibility – to provide qualitative discussion of uncertainty for KC where qualitative input data are unavailable, and encourage to provide quantitative estimate

National GHG inventory - elements

United Nations
Climate Change Secretariat

Completeness Assessment

- Should indicate sources/sinks (categories, pools, gases) included in IPCC Guidelines, but not reported.
- Shall use notation keys (NO, NE, NA, IE, C) where numerical data not reported, describing why the emissions for specific categories are not reported.
- May exclude "insignificant" categories from reporting, where insignificant defined as categories being 500 kt CO_2 eq or 0.05% of national emissions, excluding LULUCF, whichever is lower. Total sum of categories considered insignificant must remain below 0.1% of total national emissions (with flexibility – threshold 0.1% of total, aggregate of insignificant shall remain 0.2%)
- Once categories are reported, Parties shall continue reporting them in subsequent submissions.

QA/QC

- Shall elaborate an inventory QA/QC plan (with flexibility – encouraged)
- Shall implement general inventory QC procedures (with flexibility – encouraged)
- Should apply category-specific QC procedures for key categories and for categories in which significant methodological changes and/or data revisions have occurred.
- Should implement QA procedures – basic peer review of inventory
- Should compare national estimates of CO_2 emissions (fuel combustion) with the reference approach, and report results.

GHG SUPPORT ACTIVITIES

United Nations
Climate Change Secretariat

Core components

United Nations
Climate Change Secretariat

Core components	Cross-cutting
Sustainable National GHG Inventory Management Systems (setting-up, maintenance of institutional, legal, procedural arrangements)	▪ Reporting requirements for MRV ▪ Reporting requirements for ETF (MPGs)
Knowledge Development (technical capacity on methods, tools, reporting requirements,…)	▪ 2006 IPCC Guidelines for national GHG inventories, incl. IPCC inventory software ▪ 2013 Supplement to the 2006 IPCC Guidelines for National GHG Inventories: Wetlands
Data Management and Quality (data improvement, gaps filling, uncertainty analysis, time-series consistency,…)	▪ 2019 Refinement to the 2006 IPCC Guidelines (used on a voluntary basis)

Work packages

United Nations
Climate Change Secretariat

Regional WS on GHG-IMS and 2006 IPCC GLs	Quality Assurance GHG-IMS, GHGI	Tools and software	E-learning and certification
1 week regional WS each year (Africa, Asia-Pacific and Eastern Europe, Latin America and Caribbean with the collaboration of IPCC, FAO and US EPA	*1 week in-country working sessions, upon request, voluntary and confidential (IMS, GHG inventories in NC, BUR, NDC) with the collaboration of FAO → findings, comments, recommendations for improvement documented in almost 200-page QA template.*	* IPCC inventory software * Full Lands Integration Tool (FLINT) * Data collection and management tool (Energy, IPPU, etc.) * Mitigation tool linked to the IPCC software	*Online training courses (2006 IPCC GLs, Wetlands supplement) and examination – in collaboration with GHG-Management Institute *Input to the UNFCCC RoE

Thematic workshops	Energy statistics and energy balance	GHG Help Desk	AFOLU platform
* Uncertainty analysis (error propagation, Monte Carlo simulation, uncertainty levels in input data used in national GHG inventories) * Data collection, management	Inst. arrangements, statistics (NC, BUR, NDC, BTRs, domestic policies, etc.), training materials, etc. with the collaboration of UN Statistics Division, IEA.	Continued support to developing countries on GHG inventory-related issues via an interactive communication platform.	Inst. arrangements, access/processing remote sensing data, livestock characterisation, training materials, etc. (under development)

VIEWS / COMMENTS / QUESTIONS?

Please contact us at

GHGCapacityBuilding@unfccc.int

United Nations
Climate Change Secretariat