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Climate Change

National GHG Inventory Reporting Introduction to MPGs*

Tomoyuki Aizawa
Transparency Division
UNFCCC Secretariat

28 May 2024

* Modalities, Procedures, and Guidelines contained in decision 18/CMA.1



Agenda

- Biennial Transparency Report
- Reporting requirements for GHG inventories
- Modalities Procedures and Guidelines
- National Inventory Report
 - National Inventory Document
 - Common Reporting Tables
- Flexibility provisions
- Interoperability with IPCC Software
- GHG Inventory Workflow
- Terminology



Biennial Transparency Report



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Biennial Transparency Report (BTR)

Biennial Transparency Report

2024

I. National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs) **[All Party - Shall]**

II. Information necessary to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement **[All Party - Shall]**

III. Information on climate change impacts and adaptation under Article 7 of the Paris Agreement **[All Party - Should]**

IV. Information on financial, technology development and transfer and capacity-building support provided and mobilized under Articles 9–11 of the Paris Agreement **[Developed Party – Shall]**

V. Information on financial, technology development and transfer and capacity-building support needed and received under Articles 9–11 of the Paris Agreement **[Developed Party – Should]**

VI. Information to be reported when NCs and BTR are submitted jointly every four years

VII. Information on flexibility **[Developed Party – Applying flexibility]**

VIII. Improvements in reporting over time

IX. Any other information

Annexes

Annex I: Technical annexes for REDD+, as applicable

Annex II: CRT for the electronic reporting of the NIR

Annex III: CTFs for electronic reporting on tracking progress of NDCs and FTC support provided/mobilized and/or needed/received

Annex IV: Information in relation to the Party's participation in cooperative approaches, as applicable



Reporting requirement for GHG Inventories under Paris Agreement

Article 13 of the Paris Agreement

National inventory report (NIR) of GHG emissions

7. **Each Party shall** regularly provide the following information:

(a) A **national inventory report** of anthropogenic emissions by sources and removals by sinks of greenhouse gases, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to this Agreement;

Decision 18/CMA.1, Annex, Chapter II

National inventory document (NID) and Common reporting tables (CRT)

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.

Decision 5/CMA.3

1. **Adopts:**

(a) The **common reporting tables** referred to in chapter II of the annex to decision 18/CMA.1 for the electronic reporting of the information in the national inventory reports of anthropogenic emissions by sources and removals by sinks of greenhouse gases, as contained in annex I;



National Inventory Report



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Elements of National Inventory Report (decision 18/CMA.1)

A. Definitions

- Definition of principles – 2006 IPCC Guidelines (TACCC)

B. National circumstances and institutional arrangements

- National for the national inventory
- Inventory preparation process
- Archiving of all information
- Processes for approval of the inventory

C. Methods

- Methodologies, parameters, and data
- Key category analysis **[Flexibility]**
- Time-series consistency and recalculations
- Uncertainty assessment **[Flexibility]**
- Assessment of completeness **[Flexibility]**
- Quality assurance/quality control **[Flexibility]**

D. Metrics

- GWP from IPCC AR5
- Aggregate GHGs expressed in CO₂ eq.

E. Reporting guidance

- Information on methods and cross-cutting elements
- Sectors and gases **[Flexibility]**
- Time series **[Flexibility]**



Guiding principles of MPGs

- Building on and enhancing the transparency arrangements under the Convention
- Facilitating improved reporting and transparency over time
- Providing **flexibility** to developing country Parties
- Promoting TACCC principles
- Avoiding duplication of work and undue burden on Parties and the secretariat
- Ensuring that Parties maintain the frequency and quality of reporting under the Convention
- Ensuring that double counting is avoided
- Ensuring that the GHG inventory is neither overestimated nor underestimated



GHG Inventory Principles (TACCC)

Principles	Description
Transparency	the national GHG inventory is transparent if there is sufficient and clear documentation such that individuals or groups other than the inventory compilers can understand how the inventory was compiled and can assure themselves that it meets the good practice requirements for national GHG inventories.
Accuracy	the national GHG inventory is accurate if it contains neither overestimates nor underestimates so far as can be judged. This means making every endeavor to remove bias from the inventory estimates.
Completeness	the national GHG inventory is complete if estimates are reported for all relevant categories of sources and sinks, and gases across the entire geographic area of the Party . Where elements are missing their absence should be clearly documented together with a justification for exclusion.
Consistency	the national GHG inventory is consistent if 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 and removals . Inventory annual trends, as far as possible, should be calculated using the same method and data sources in all years and should aim to reflect the real annual fluctuations in emissions or removals and not be subject to changes resulting from methodological differences.
Comparability	the national GHG inventory is comparable if it is reported in a way that allows it to be compared with national GHG inventories for other countries . Comparability is reflected in the appropriate choice of key categories and in the use of the reporting guidance tables and definitions of categories of emissions and removals contained in volumes 2–5 of the 2006 IPCC Guidelines, as implemented through the MPGs.



Reporting requirements for GHG inventories

- Report anthropogenic GHG emissions by sources and removals by sinks
- Report estimates of emissions and removals for all categories, gases, and carbon pools considered in the inventory throughout the reported period on a gas-by-gas basis in units of mass at the most disaggregated level, in accordance with the MPGs, using the CRTs.
- A minimum level of aggregation may be needed to protect confidential business and military information.
- Emissions and removals must be reported separately, except in cases where it may be technically impossible to separate the information on emissions and removals in the LULUCF sector.
- Party shall use the 2006 IPCC Guidelines and are encouraged to use the 2013 Wetlands Supplement to the 2006 IPCC Guidelines



2006 IPCC Guidelines for National Greenhouse Gas Inventories



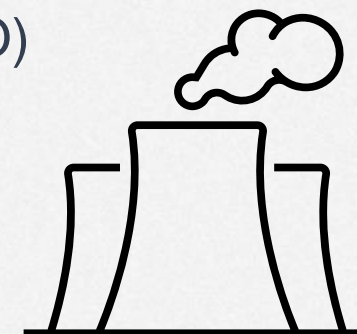
Sectors and Gases

Sector

1. Energy
 2. IPPU
 3. Agriculture
 4. LULUCF;
 5. Waste
 6. Other (if applicable)
- *Within each sector, the categories to be reported are those defined in the relevant CRT*
 - *Parties have an opportunity to report country-specific categories.*

Gases

- ✓ Direct gases (CO_2 , CH_4 , N_2O , HFCs, PFCs, SF_6 and NF_3)
- ✓ Actual emissions (not potential emissions) of HFCs, PFCs, SF_6 and NF_3
- ✓ Emissions of HFCs and PFCs must be reported disaggregated by species of gas (e.g. HFC-134a)
- ✓ Precursor emissions (NO_x , CO, NMVOCs, SO_x)
- ✓ Indirect emissions (CO_2 , N_2O)



National Inventory Report

- NIR consists of NIDs and CRTs (complementary to each other)

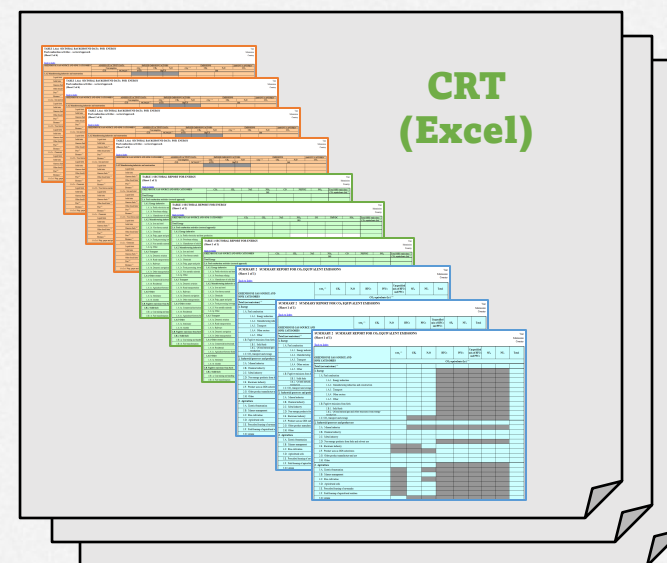
National Inventory Document (NID)

- Contains comprehensive and detailed information on how emissions and removals were estimated
- Can be submitted as part of the BTR or as a stand-alone report
- Encouraged to use NID outline
- Can be submitted in any one of the six official UN languages



Common Reporting Tables (CRT)

- Present all the quantitative information on emissions and removals in a common format
- Set of MS Excel workbook (containing 60 worksheets) for each reported year



National Inventory Document



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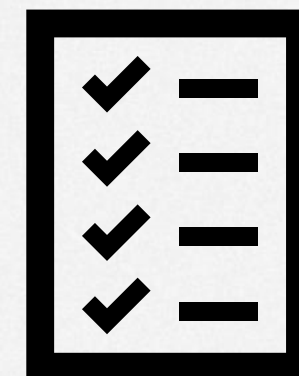
Outline of National Inventory Document (NID)

	Executive Summary
Chapter 1	National circumstances, institutional arrangements and cross-cutting information
Chapter 2	Trends in greenhouse gas emissions and removals (Sector and Gases)
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 (CRT sector 6) (if applicable)
Chapter 9	Indirect carbon dioxide and nitrous oxide emissions
Chapter 10	Recalculations and improvements
Annexes	Annex I: Key category analysis Annex II: Uncertainty assessment Annex III: Detailed description of the reference approach Annex IV: QA/QC plan Annex V: Any additional information Annex VI: Common reporting tables



Detail elements in NID for each sector

- ❑ Overview of the sector
- ❑ Category (CRT category number)
 1. Category description (e.g. characteristics of sources)
 2. Methodological issues (e.g. choice of methods/activity data/emission factors)
 3. Description of any flexibility applied (i.e. by developing country Parties)
 4. Uncertainty assessment and time-series consistency
 5. Category-specific QA/QC and verification, if applicable
 6. Category-specific recalculations, if applicable,
 7. Category-specific planned improvements, if applicable



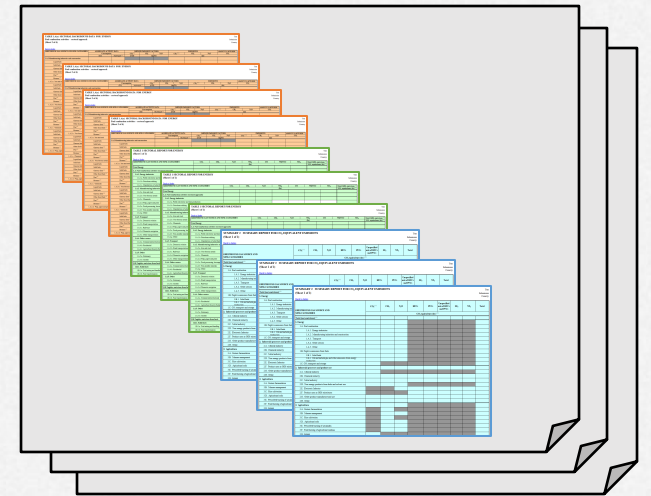
Common Reporting Tables



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Common Reporting Tables (CRT)

- Standardized set of reporting tables that all Parties must submit under the reporting requirements of the MPGs.
- Reflect the requirements of the 2006 IPCC Guidelines, as implemented by the MPGs.
- Source and sink definitions based on categorization in the 2006 IPCC Guidelines, with some modifications defined in the MPGs.
- Key characteristic of the CRTs is its commonality to ensure the use of consistent categories and definitions by all Parties (**Remember – TACCC!**)
- Parties may also add country-specific categories to the CRTs.
- CRTs contain reported figures, and NID contains the full description of the method, assumptions, data, and reference to estimate emission/removals
- Some CRT contain documentation boxes with background info and reference to NID relevant section
- Some tables have space for reporting memo items and data (e.g. international bunkers, CO2 emissions from biomass combustion) which are not to be added to emission and removal totals



Common Reporting Tables (CRT)

- Parties prepare CRTs using the GHG Inventory Reporting Tool
- CRTs are composed of 49 separate tables (some of which span multiple spreadsheets because of their size)
- Each set of tables includes data for one inventory reporting year (except for table 10 on emission trends)
- CRTs are colour-coded
 - Coloured cells are automatically completed by the software
 - Grey shaded cells should not be filled as information is not expected to exist or be provided there
 - Party fills data in white cells and it should contain either data (i.e. figures) or one of the standard CRT notation keys



Sectoral background tables

- Most of the data in the CRTs fall under level 3, that is, sectoral background data
- Require detailed information on activity data, emissions/removals, and other relevant information at the category and subcategory level
- Emissions reported on a molecular mass basis (t or kt)
- Totals at higher category level and IEF is calculated by software

TABLE 2(I).A-H SECTORAL BACKGROUND DATA FOR INDUSTRIAL PROCESSES AND PRODUCT USE
Emissions of CO₂, CH₄ and N₂O
 (Sheet 1 of 1)

Year
Submission
Country

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA		IMPLIED EMISSION FACTORS ⁽¹⁾			EMISSIONS ⁽²⁾			RECOVERY/CAPTURE ^(3,4)			
	Production/Consumption quantity		CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂ fossil	CO ₂ biogenic ⁽⁵⁾	CH ₄	N ₂ O
	Description ⁽⁶⁾	(kt)	(t/t)			(kt)			(kt)			
2.A. Mineral industry												
2.A.1. Cement production (e.g. cement or clinker production)												
2.A.2. Lime production												
2.A.3. Glass production												
2.A.4. Other process uses of carbonates												
2.A.4.a. Ceramics												
2.A.4.b. Other uses of soda ash												
2.A.4.c. Non-metallurgical magnesium production												
2.A.4.d. Other (please specify)												
2.B. Chemical industry												
2.B.1. Ammonia production ⁽⁷⁾												
2.B.2. Nitric acid production												
2.B.3. Adipic acid production												
2.B.4. Caprolactam, glyoxal and glyoxylic acid production												



Sectoral report, Cross-cutting and summary tables

Sectoral report tables

- Sectoral report tables are aggregated from the sectoral background tables
- One sectoral report for each sector
- Emission reported on both a molecular mass basis (kt) and a total CO2 eq basis

TABLE 1 SECTORAL REPORT FOR ENERGY
(Sheet 1 of 1)

Year Submission Country

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	NO _x	CO	NMOC	SO _x	Total GHG emissions ⁽¹⁾ CO ₂ equivalent (kt) ⁽²⁾
Total Energy								
1.A. Fuel combustion activities (sectoral approach)								
1.A.1. Energy industries								
1.A.1.a. Public electricity and heat production								
1.A.1.b. Petroleum refining								
1.A.1.c. Manufacture of solid fuels and other energy industries								
1.A.2. Manufacturing industries and construction								
1.A.2.a. Iron and steel								
1.A.2.b. Non-ferrous metals								
1.A.2.c. Chemicals								
1.A.2.d. Pulp, paper and print								
1.A.2.e. Food processing, beverages and tobacco								
1.A.2.f. Non-metallic minerals								
1.A.2.g. Other								
1.A.3. Transport								
1.A.3.a. Domestic aviation								
1.A.3.b. Road transportation								
1.A.3.c. Railways								
1.A.3.d. Domestic navigation								
1.A.3.e. Other transportation								
1.A.4. Other sectors								
1.A.4.a. Commercial/institutional								
1.A.4.b. Residential								
1.A.4.c. Agriculture/forestry/fishing								
1.A.5. Other								
1.A.5.a. Stationary								
1.A.5.b. Mobile								
1.B. Fugitive emissions from fuels								
1.B.1. Solid fuels								
1.B.1.a. Coal mining and handling								
1.B.1.b. Fuel transformation								

Cross-cutting and summary tables

- Summary report by sector and category
- Summary report for method and emission factor
- Indirect emissions, key category analysis, recalculations, NK explanation
- Summary of emission trends

SUMMARY 2 SUMMARY REPORT FOR CO₂ EQUIVALENT EMISSIONS
(Sheet 1 of 1)

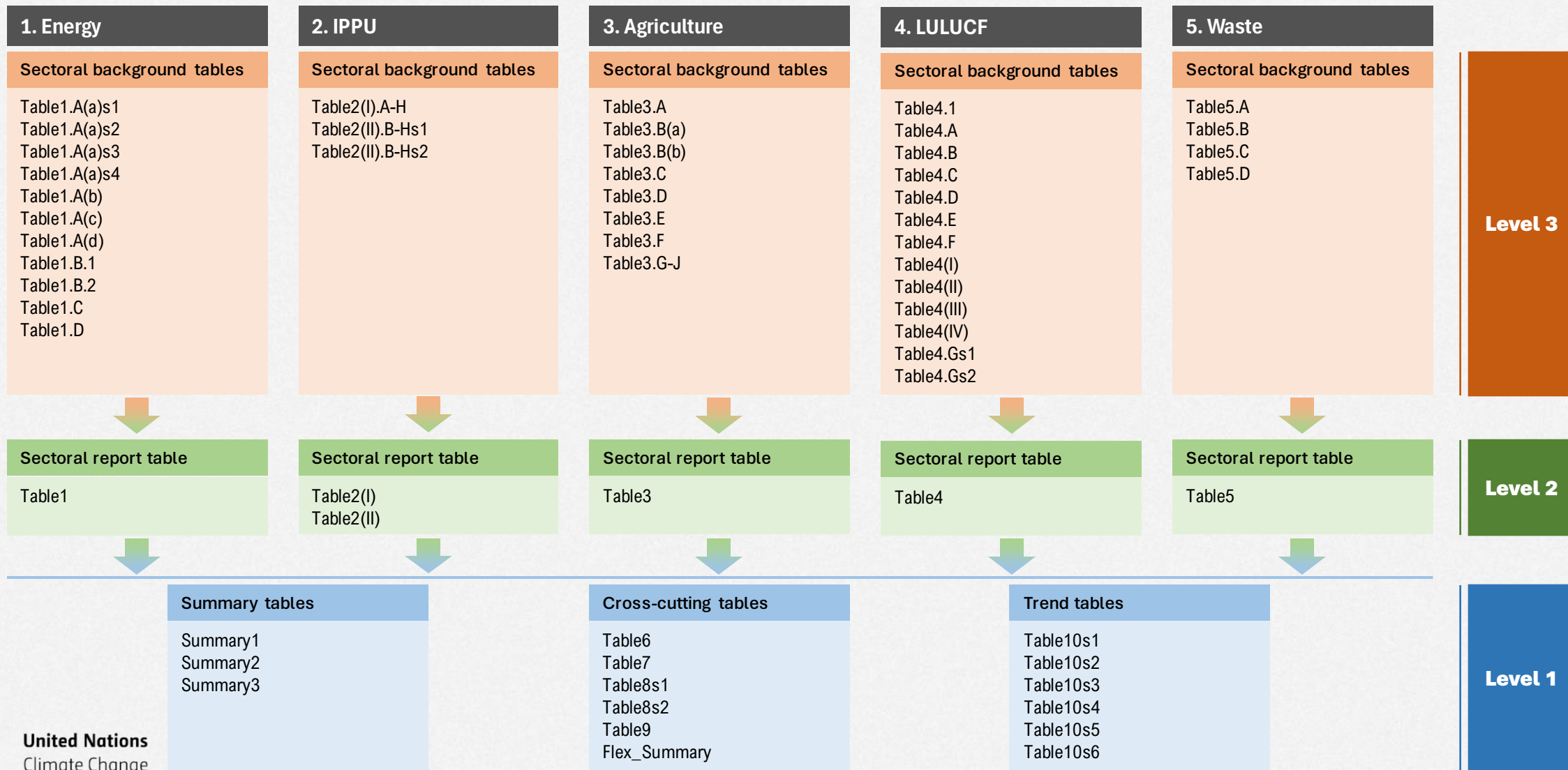
Year Submission Country

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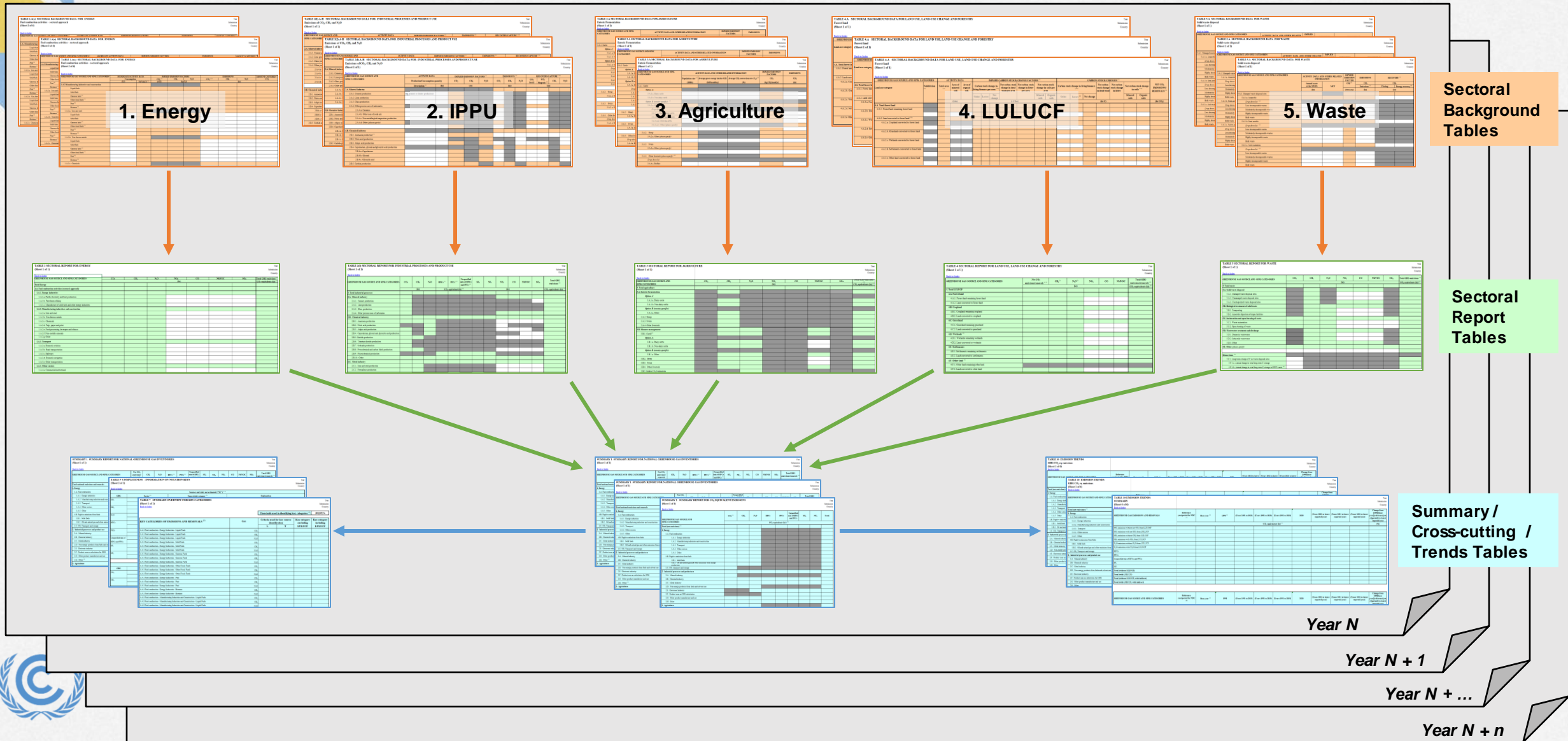
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂ ⁽¹⁾	CH ₄	N ₂ O	HFCs	PFCs	Unspecified mix of HFCs and PFCs	SF ₆	NF ₃	Total
	CO ₂ equivalents (kt) ⁽²⁾								
Total (net emissions)⁽¹⁾									
1. Energy									
1.A. Fuel combustion									
1.A.1. Energy industries									
1.A.2. Manufacturing industries and construction									
1.A.3. Transport									
1.A.4. Other sectors									
1.A.5. Other									
1.B. Fugitive emissions from fuels									
1.B.1. Solid fuels									
1.B.2. Oil and natural gas and other emissions from energy production									
1.C. CO ₂ transport and storage									
2. Industrial processes and product use									
2.A. Mineral industry									
2.B. Chemical industry									
2.C. Metal industry									
2.D. Non-energy products from fuels and solvent use									
2.E. Electronic industry									
2.F. Product uses as ODS substitutes									
2.G. Other product manufacture and use									
2.H. Other									
3. Agriculture									
3.A. Enteric fermentation									
3.B. Manure management									
3.C. Rice cultivation									
3.D. Agricultural soils									
3.E. Prescribed burning of savannahs									
3.F. Field burning of agricultural residues									
3.G. Liming									



CRT structure



CRT worksheets



Notation keys in CRT

Notation keys are used when numerical data are not available to report

Notation Keys	Description
NO (not occurring)	For categories or processes, including recovery, under a particular source or sink category that do not occur in the country.
NE (not estimated)	For activity data and/or emissions by sources and removals by sinks of GHGs that have not been estimated but for which a corresponding activity may occur in the country.
NA (not applicable)	For activities under a given source/ sink category that do occur within the country but do not result in emissions or removals of a specific gas.
IE (included elsewhere)	For emissions by sources and removals by sinks of GHGs that have been estimated but are included in a part of the inventory other than the expected source/sink category.
C (confidential)	For emissions by sources and removals by sinks of GHGs where the reporting would involve the disclosure of confidential information.
FX (flexibility)	For reporting the application of the flexibility



CRT – Energy

1. Energy

Sectoral report table	Table1	Sectoral report for Energy
Sectoral background table	Table1.A(a)s1	Fuel combustion activities - sectoral approach - Categories 1.A.1
	Table1.A(a)s2	Fuel combustion activities - sectoral approach - Categories 1.A.2
	Table1.A(a)s3	Fuel combustion activities - sectoral approach - Categories 1.A.3
	Table1.A(a)s4	Fuel combustion activities - sectoral approach - Categories 1.A.4 and 1.A.5
	Table1.A(b)	CO2 from fuel combustion activities - reference approach
	Table1.A(c)	Comparison (reference and sectoral approach) of CO2 emissions from fuel combustion
	Table1.A(d)	Feedstocks, reductants and other non-energy use of fuels
	Table1.B.1	Fugitive emissions - Solid fuels
	Table1.B.2	Fugitive emissions - Oil, natural gas and other emissions from energy production
	Table1.C	CO2 Transport and storage
Table1.D	International aviation and international navigation (international bunkers) and multilateral operations	



CRT – IPPU

2. Industrial Processes and Product Use (IPPU)

Sectoral report table	Table2(I)	Sectoral report for Industrial Processes and Product Use
Sectoral background table	Table2(I).A-H	Emissions of CO2, CH4 and N2O
Sectoral report table	Table2(II)	Sectoral report for Industrial Processes and Product Use - Emissions of HFCs, PFCs, SF6 and NF3
Sectoral background table	Table2(II).B-Hs1	Sources of fluorinated substances - Categories 2.B, 2.C and 2.E
	Table2(II).B-Hs2	Sources of fluorinated substances - Categories 2.F, 2.G and 2.H



CRT – Agriculture

3. Agriculture

Sectoral report table	Table3	Sectoral report for Agriculture
Sectoral background table	Table3.A	Enteric fermentation
	Table3.B(a)	CH4 emissions from manure management
	Table3.B(b)	N2O emissions from manure management
	Table3.C	Rice cultivation
	Table3.D	Direct and indirect N2O emissions from agricultural soils
	Table3.E	Prescribed burning of savannahs
	Table3.F	Field burning of agricultural residues
Table3.G-J	CO2 emissions from liming, urea application and other carbon-containing fertilizers	



CRT – LULUCF

4. Land Use, Land-Use Change and Forestry (LULUCF)

Sectoral report table	Table4	Sectoral report for Land Use, Land-Use Change and Forestry
Sectoral background table	Table4.1	Land transition matrix - Areas and changes in areas between the previous and the current inventory year
	Table4.A	Forest land
	Table4.B	Cropland
	Table4.C	Grassland
	Table4.D	Wetlands
	Table4.E	Settlements
	Table4.F	Other land
	Table4(I)	Direct and indirect nitrous oxide (N ₂ O) emissions from nitrogen (N) inputs to managed soils
	Table4(II)	Emissions and removals from drainage and rewetting and other management of organic and mineral soils
	Table4(III)	Direct and indirect nitrous oxide (N ₂ O) emissions from nitrogen (N) mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils
	Table4(IV)	Biomass burning
	Table4.Gs1	Harvested wood products (HWP)
	Table4.Gs2	HWP Activity data



CRT – Waste

5. Waste

Sectoral report table	Table5	Sectoral report for Waste
Sectoral background table	Table5.A	Solid waste disposal
	Table5.B	Biological treatment of solid waste
	Table5.C	Incineration and open burning of waste
	Table5.D	Wastewater treatment and discharge



CRT – Summary, Cross-cutting, Trends

Summary, Cross-cutting, Trends

Summary	Summary1	Summary report for national greenhouse gas inventories
	Summary2	Summary report for national greenhouse gas inventories (kt CO2 equivalent)
	Summary3	Summary report for methods and emission factors used
Cross-cutting	Table6	Indirect emissions of N2O and CO2
	Table7	Summary overview for key category
	Table8s1	Recalculation - Recalculated data (CO2, CH4 and N2O)
	Table8s2	Recalculation - Recalculated data (HFCs, PFCs, SF6 and NF3)
	Table9	Completeness - Information on notation keys
	Flex_Summary	Summary table on the use of flexibility provisions
	Trends	Table10s1
Table10s2		Emission trends - CO2
Table10s3		Emission trends - CH4
Table10s4		Emission trends - N2O
Table10s5		Emission trends - HFCs, PFCs, SF6 and NF3
Table10s6		Emission trends - Summary



Flexibility provisions



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Flexibility provisions (1/2)

Reference in the MPGs (Annex to decision 18/CMA.1)	Provision in the MPGs	Flexibility provision for those developing country parties that need it in the light of their capacities
Para. 25 Key category analysis	Parties shall implement the key category analysis consistent with the IPCC guidelines (i.e. apply the 95 per cent threshold defined in the IPCC guidelines).	Identify key categories using a threshold no lower than 85 per cent in place of the 95 per cent threshold defined in the IPCC guidelines.
Para. 29 Uncertainty assessment	Parties shall quantitatively estimate and qualitatively discuss the uncertainty of the emission and removal estimates for all categories, including inventory totals, for at least the starting year and the latest reporting year of the inventory time series, and shall also estimate the trend uncertainty for these same categories/inventory totals for the entire time series.	Provide, at a minimum, a qualitative discussion of uncertainty for key categories, using the IPCC guidelines where quantitative input data are unavailable to quantitatively estimate uncertainties. Parties are also encouraged to provide a quantitative estimate of uncertainty for all source and sink categories of the GHG inventory.
Para. 32 Insignificance threshold	A category should only be considered insignificant if the likely level of emissions is below 0.05 per cent of the national total GHG emissions, excluding LULUCF, or 500 kt CO ₂ eq, whichever is lower. The total national aggregate of estimated emissions for all gases from categories considered insignificant shall remain below 0.1 per cent of the national total GHG emissions, excluding LULUCF.	Consider emissions to be insignificant if the likely level of emissions is below 0.1 per cent of the national total GHG emissions, excluding LULUCF, or 1,000 kt CO ₂ eq, whichever is lower. The total national aggregate of estimated emissions for all gases from categories considered insignificant, in this case, shall remain below 0.2 per cent of the national total GHG emissions, excluding LULUCF.



Flexibility provisions (2/2)

Reference in the MPGs (Annex to decision 18/CMA.1)	Provision in the MPGs	Flexibility provision for those developing country parties that need it in the light of their capacities
Para. 34 QA/QC plan	Parties shall elaborate an inventory QA/QC plan in accordance with the IPCC guidelines, including information on the inventory agency responsible for implementing QA/QC.	Encouraged to elaborate an inventory QA/QC plan in accordance with the IPCC guidelines, including information on the inventory agency responsible for implementing QA/QC.
Para. 35 QC procedures	Parties shall implement and provide information on general inventory QC procedures in accordance with the QA/QC plan and the IPCC guidelines.	Encouraged to implement and provide information on general inventory QC procedures in accordance with the QA/QC plan and the IPCC guidelines.
Para. 48 Reporting F-Gases	Parties shall report on seven gases: CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ and NF ₃ .	Report at least three gases (CO ₂ , CH ₄ and N ₂ O) as well as any of the additional four gases (HFCs, PFCs, SF ₆ and NF ₃) that are included in the Party's NDC under Article 4 of the Paris Agreement, are covered by an activity under Article 6 of the Paris Agreement or have been previously reported.
Para. 57 Annual time series years	Parties shall report a consistent annual time series starting from 1990.	Parties may report data covering, at a minimum, the reference year/period for their NDC under Article 4 of the Paris Agreement and, in addition, a consistent annual time series from at least 2020 onward.
Para. 58 Last year in time series	The latest reporting year shall be no more than two years prior to the submission of the national inventory report.	The latest reporting year shall be no more than three years prior to the submission of the national inventory report.



Interoperability



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Interoperability with IPCC software

- Decision 5/CMA.3
Requests the secretariat to facilitate interoperability between the reporting tools and the Intergovernmental Panel on Climate Change inventory software
- Implemented through the JSON file
- User estimates GHG emissions in the IPCC software
- Generates the JSON file from the IPCC software
- Can be done at sectoral level or for whole inventory
- Secretariat working closely with IPCC to facilitate interoperability

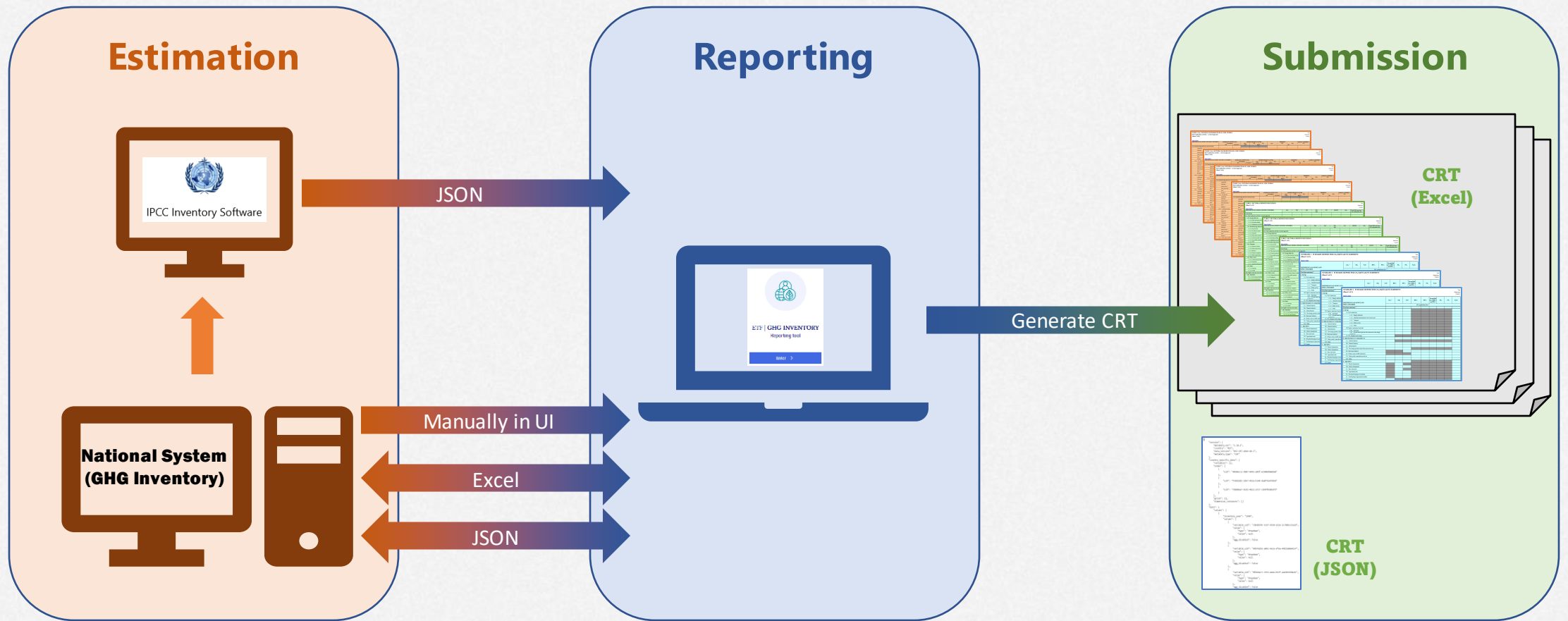
The screenshot displays the IPCC Inventory Software interface. The main window shows a tree view of IPCC categories on the left and a data table on the right. The table is titled 'Equation 2.4' and contains columns for Subprocess, Fuel, Total consumption (TJ), CO2 Emissions (kg CO2e), CH4 Emissions (kg CH4), and N2O Emissions (kg N2O). The data is for the year 1990 and includes a row for 'Unspecified' with a total consumption of 8000 TJ, 308 kg CO2e, 0.005 kg CH4, and 0.005 kg N2O.

Subprocess	Fuel	Total consumption (TJ)	CO2 Emissions (kg CO2e)	CH4 Emissions (kg CH4)	N2O Emissions (kg N2O)
Unspecified	Ethane	8000	308	0.005	0.005
TOTAL		8000	308	0.005	0.005

A 'CRT Data Set Manager' window is open in the foreground, showing a table with columns for 'CRT Data Set name' and 'Date created'. The table contains one entry: 'CRT_2' with a date of '01.09.2023 09:58:12'. The 'Generate JSON' button is highlighted with a red box.



GHG inventory workflow



Terminology

Term	Description
National inventory report (NIR)	Composed of a CRT and an NID.
National inventory document (NID)	Set of detailed and complete information on the inventory that should ensure transparency and contain sufficiently detailed information to enable the inventory to be reviewed.
Common reporting tables (CRT)	A standardized format for reporting estimates of GHG emissions and removals and other relevant information, facilitating the review of inventory data and trends and comparability across Parties.
Modalities, procedures and guidelines (MPG)	Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement, set out in the annex to decision 18/CMA.1.
Greenhouse gases (GHG)	Gases which, in increased atmospheric concentrations, contribute to the rise in global average surface temperature. These include CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ and NF ₃ .
2006 IPCC Guidelines	An IPCC report providing methodologies for estimating national inventories of anthropogenic GHG emissions by sources and removals by sinks. The use of these guidelines is mandatory for all Parties in the preparation of their GHG inventories. Note that Parties are encouraged to use the Wetlands Supplement to estimate relevant emissions and removals. Parties may use on a voluntary basis the 2019 Refinement to the 2006 IPCC Guidelines.
Notation keys	In the CRTs, Parties are required to use the standard notation keys "NO", "NE", "NA", "IE", "C" and "FX", where no numerical values are available, to ensure that their inventories are complete.
Key category	A source or sink category that is prioritized within the national inventory system because its estimate has a significant influence on a country's total inventory of direct GHGs in terms of the absolute level of emissions, the trend in emissions or the uncertainty of emissions or removals (see vol. 1, chap. 4 of the 2006 IPCC Guidelines).
Quality control	A system of routine technical activities to assess and maintain the quality of the inventory as it is being compiled.
Quality assurance	A planned system of review procedures conducted by personnel not directly involved in the inventory compilation or development process.
Verification	Activities and procedures conducted during the planning and development or after completion of an inventory that can help to establish its reliability.
Uncertainty	Lack of knowledge of the true value of a variable. Estimates of uncertainty are needed for all relevant source and sink categories, GHGs, inventory totals as a whole and their trends.





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Thank you for attending!

Let's keep this conversation going.

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Let's work **#Together4Transparency**

Find out more at:

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Contact us at:

Tools.Support@unfccc.int

