

Virtual Webinar as a part of the workshop for Central Asia & Caucasus and
Eurasia Countries:
“Deep-dive into preparation and reporting of results of national GHG inventories
under the ETF of the Paris Agreement”
8 April 2024

Presentation:
Contents of the Common Reporting Table-CRT

What are the CRTs?

Decision 18/CMA.1

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.**

47. Each Party **shall** report estimates of emissions and removals for all categories, gases and carbon pools considered in the GHG inventory throughout the reported period on a gas by-gas basis in units of mass at the most disaggregated level, in accordance with the IPCC guidelines referred to in paragraph 20 above, **using the common reporting tables**, including a descriptive summary and figures underlying emission trends, with emissions by sources listed separately from removals by sinks, except in cases where it may be technically impossible to separate information on emissions and removals in the LULUCF sector, and noting that a minimum level of aggregation is needed to protect confidential business and military information.

The CRTs are a **standardized set of reporting tables** that all Parties must submit under the reporting requirements of the MPGs.

Building on CRF tables used by Annex I Parties to report their annual GHG inventories

The key characteristic is commonality.

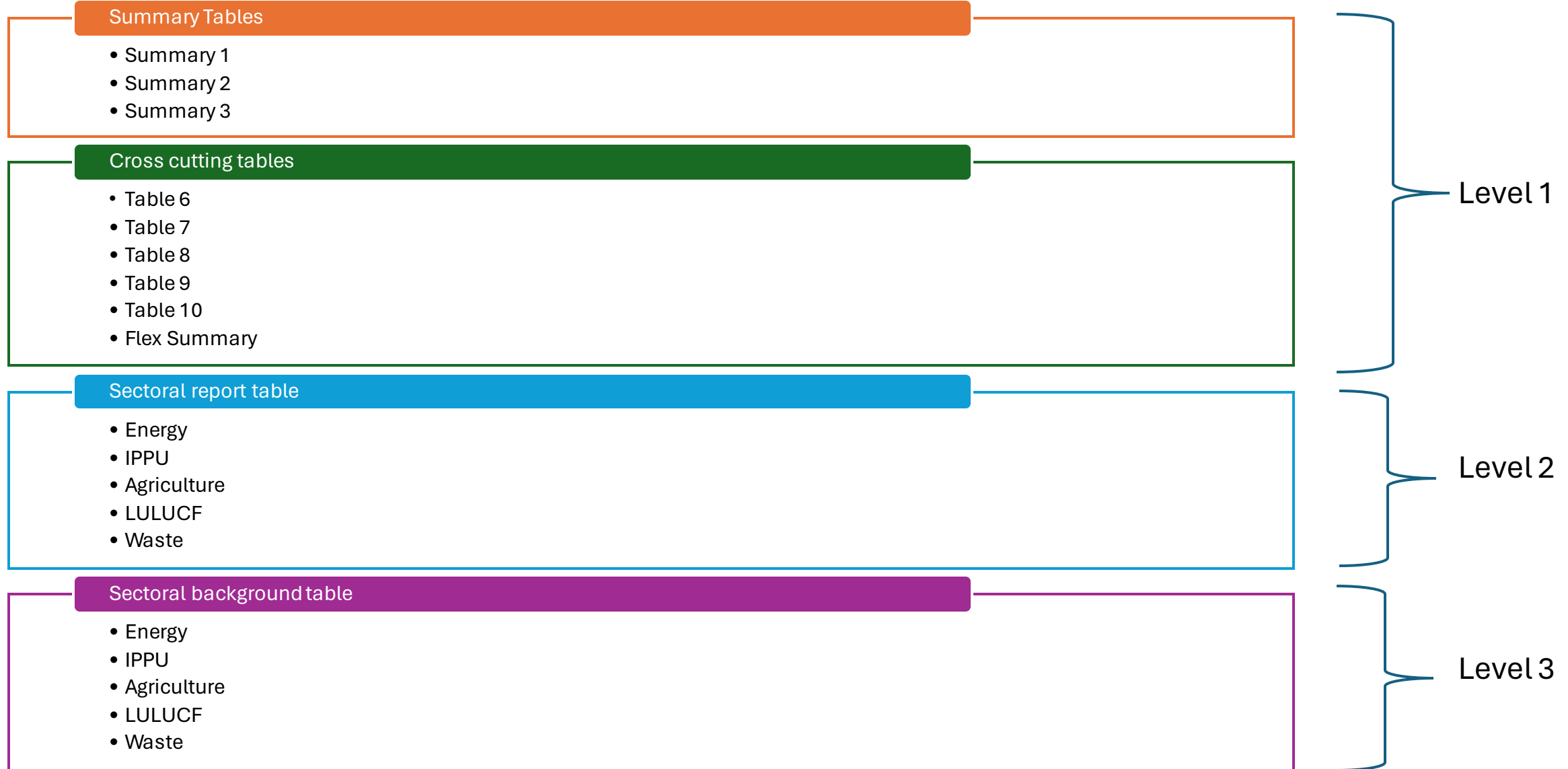
Consistent categories and definitions by all Parties.

All sectors, categories, gases and pools defined in the MPGs

The source and sink definitions are based on 2006 IPCC Guidelines

Structure of CRT

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



Source: UNFCCC BTR review training: Course B. Technical review of national inventory reports of anthropogenic emissions by sources and removals by sinks of ghg

Cells in CRT tables

Unshaded cells show data completed by Parties;

In the **grey shaded cells** information is not applicable

Colored shaded cells are automatically completed by excel

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂	CH ₄	N ₂ O	NO _x	CO	NM VOC	SO _x	Total GHG emissions ⁽¹⁾
	(kt)							CO ₂ equivalents (kt) ⁽²⁾
5. Total waste								
5.A. Solid waste disposal								
5.A.1. Managed waste disposal sites								
5.A.2. Unmanaged waste disposal sites								
5.A.3. Uncategorized waste disposal sites								

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS		N ₂ O EMISSIONS		
	Area ⁽³⁾	N mineralised in mineral soils associated with loss of soil C from soil organic matter ⁽⁴⁾	N ₂ O-N emissions per area ⁽⁵⁾	N ₂ O-N emissions per unit of N lost through leaching and run-off	Direct Emissions	Indirect Emissions ^(4,6)	Total Emissions
Land-use category ⁽²⁾	(kha)	(t N/year)	(kg N ₂ O-N/ha)	(kg N ₂ O-N/kg N)			
4(III). Total for all land-use categories							
4(III).A. Forest land ⁽⁷⁾							
4(III).A.1. Forest land remaining forest land							
4(III).A.2. Lands converted to forest land ⁽⁸⁾							
Drop down list:							

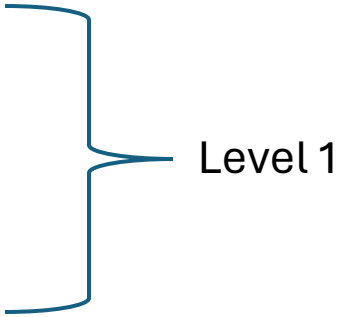
Structure of CRT

Summary Tables
Summary 1
Summary 2
Summary 3



Other Tables

Table 6	Table 9
Table 7	Table 10
Table 8	Flex Summary



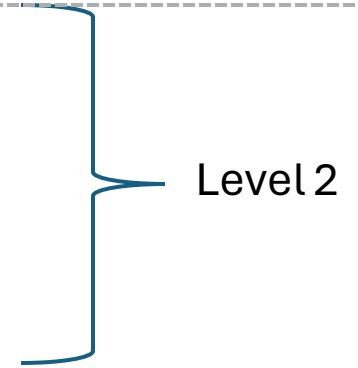
Energy

IPPU

Agriculture

LULUCF

Waste



SRT
Table 1

SRT
Table 2 (I)
Table 2 (II)

SRT
Table 3

SRT
Table 4

SRT
Table 5

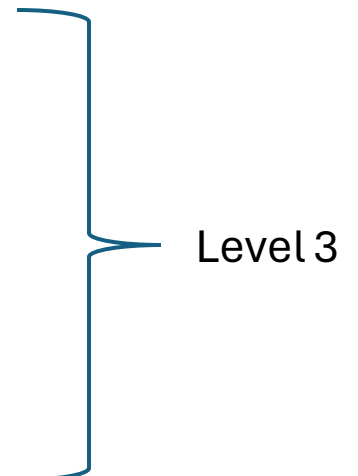
SBDT
Table 1.A(a)
Table 1.A(b)
Table 1.A(c)
Table 1.A(d)
Table 1.B.1
Table 1.B.2
Table 1.C
Table 1.D

SBDT
Table 2 (I) A-H
Table 2 (II) B-H

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Table 3.A
Table 3.B(a)
Table 3.B(b)
Table 3.C
Table 3.D
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Table 3.F
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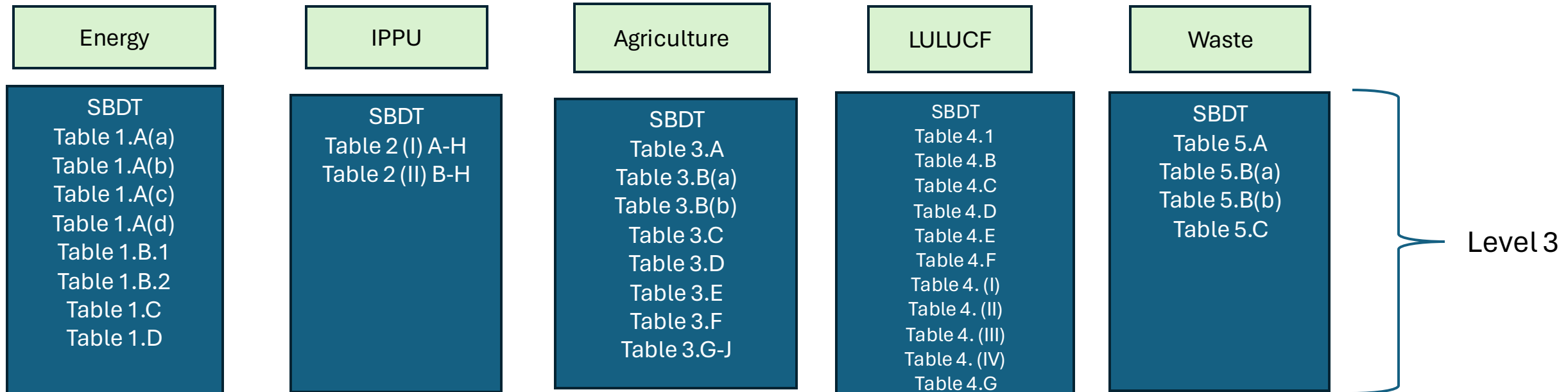
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Table 5.A
Table 5.B(a)
Table 5.B(b)
Table 5.C



Level 3 - Sectoral background data tables

- Detailed information on emissions, removals, AD and other relevant information
- Most of the data is filled in by the inventory compiler.
 - The exceptions are the cells in which emissions are summed at the category level, along with IEFs or implied carbon stock change factors



Level 3 - Example of sectoral background data

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 ⁽⁵⁾	(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												
2.B.4.a. Caprolactam												
2.B.4.b. Glyoxal												
2.B.4.c. Glyoxylic acid												
2.B.5. Carbide production												
2.B.5.a. Silicon carbide												
2.B.5.b. Calcium carbide												
2.B.6. Titanium dioxide production												
2.B.7. Soda ash production												
2.B.8. Petrochemical and carbon black production												
2.B.8.a. Methanol												
2.B.8.b. Ethylene												
2.B.8.c. Ethylene dichloride and vinyl chloride monomer												
2.B.8.d. Ethylene oxide												
2.B.8.e. Acrylonitrile												
2.B.8.f. Carbon black												

Level 3 - Example of sectoral background data

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 ⁽⁵⁾	(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 <i>(please specify)</i>												
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												
2.B.4.a. Caprolactam												
2.B.4.b. Glyoxal												
2.B.4.c. Glyoxylic acid												
2.B.5. Carbide production												
2.B.5.a. Silicon carbide												
2.B.5.b. Calcium carbide												
2.B.6. Titanium dioxide production												
2.B.7. Soda ash production												
2.B.8. Petrochemical and carbon black production												
2.B.8.a. Methanol												
2.B.8.b. Ethylene												
2.B.8.c. Ethylene dichloride and vinyl chloride monomer												
2.B.8.d. Ethylene oxide												
2.B.8.e. Acrylonitrile												
2.B.8.f. Carbon black												

Activity data, kt

Implied Emission Factor, t/t

Emissions, kt

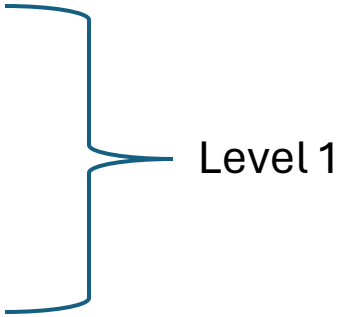
Recovery/capture, kt

Structure of CRT

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Other Tables
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Flex Summary



Level 1



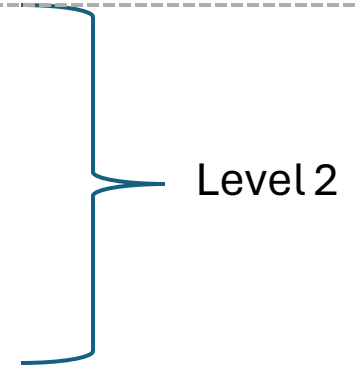
Energy

IPPU

Agriculture

LULUCF

Waste



Level 2

SRT
Table 1

SRT
Table 2 (I)
Table 2 (II)

SRT
Table 3

SRT
Table 4

SRT
Table 5

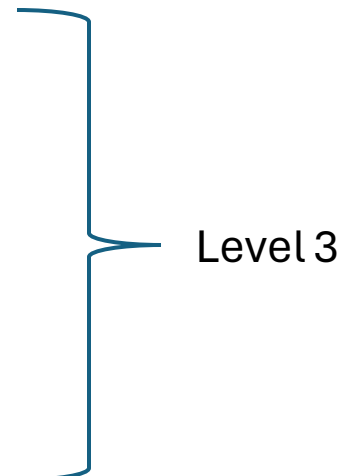
SBDT
Table 1.A(a)
Table 1.A(b)
Table 1.A(c)
Table 1.A(d)
Table 1.B.1
Table 1.B.2
Table 1.C
Table 1.D

SBDT
Table 2 (I) A-H
Table 2 (II) B-H

SBDT
Table 3.A
Table 3.B(a)
Table 3.B(b)
Table 3.C
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SBDT
Table 4.1
Table 4.B
Table 4.C
Table 4.D
Table 4.E
Table 4.F
Table 4. (I)
Table 4. (II)
Table 4. (III)
Table 4. (IV)
Table 4.G

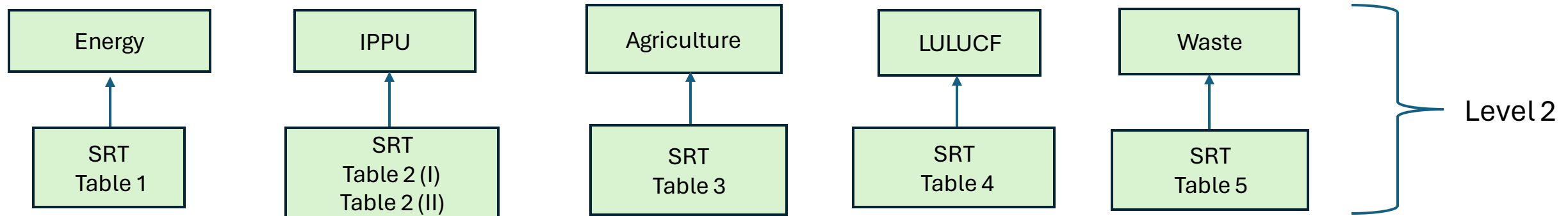
SBDT
Table 5.A
Table 5.B(a)
Table 5.B(b)
Table 5.C



Level 3

Level 2 - Sectoral reporting tables

- **Level 2 aggregate the data from the sectoral background data tables at the sectoral level.**
- One level 2 table for each sector.
- Emissions are reported on a mass basis (kt) and a total CO2 eq basis.



Level 2 – Example of sectoral report table

TABLE 5 SECTORAL REPORT FOR WASTE
(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	NM VOC	SO _x	Total GHG emissions ⁽¹⁾
				(kt)				CO ₂ equivalents (kt) ⁽²⁾
5. Total waste								
5.A. Solid waste disposal								
5.A.1. Managed waste disposal sites								
5.A.2. Unmanaged waste disposal sites								
5.A.3. Uncategorized waste disposal sites								
5.B. Biological treatment of solid waste								
5.B.1. Composting								
5.B.2. Anaerobic digestion at biogas facilities								
5.C. Incineration and open burning of waste								
5.C.1. Waste incineration								
5.C.2. Open burning of waste								
5.D. Wastewater treatment and discharge								
5.D.1. Domestic wastewater								
5.D.2. Industrial wastewater								
5.D.3. Other								
5.E. Other (please specify)								
Memo item: ⁽³⁾								
5.F.1. Long-term storage of C in waste disposal sites								
5.F.1.a. Annual change in total long-term C storage								
5.F.1.b. Annual change in total long-term C storage in HWP waste ⁽⁴⁾								

GHG emissions, kt

NO_x, CO,
NMVOC and
SO_x, kt

Total GHG
CO₂ eq.

Structure of CRT

Summary Tables
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Summary 3

Other Tables
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Flex Summary

Level 1

Energy

IPPU

Agriculture

LULUCF

Waste

Level 2

SRT
Table 1

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Table 2 (I)
Table 2 (II)

SRT
Table 3

SRT
Table 4

SRT
Table 5

Level 3

SBDT
Table 1.A(a)
Table 1.A(b)
Table 1.A(c)
Table 1.A(d)
Table 1.B.1
Table 1.B.2
Table 1.C
Table 1.D

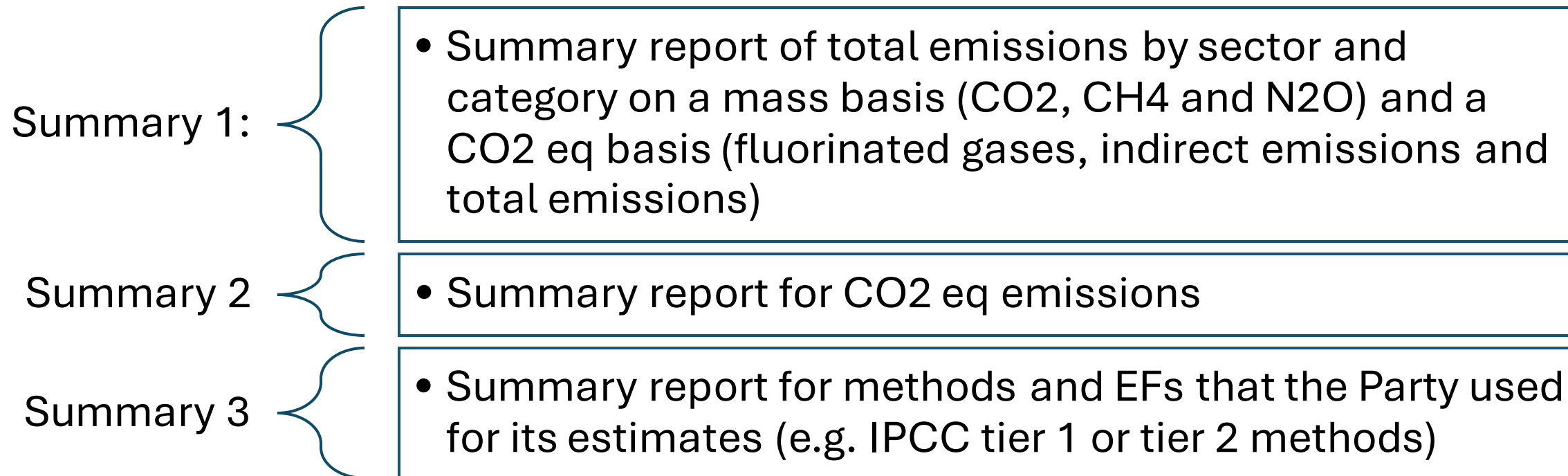
SBDT
Table 2 (I) A-H
Table 2 (II) B-H

SBDT
Table 3.A
Table 3.B(a)
Table 3.B(b)
Table 3.C
Table 3.D
Table 3.E
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Table 4.G

SBDT
Table 5.A
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Table 5.C

Level 1: Summary tables



Summary Tables

Summary 1
Summary 2
Summary 3

Level 1

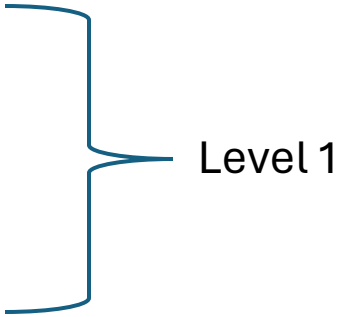
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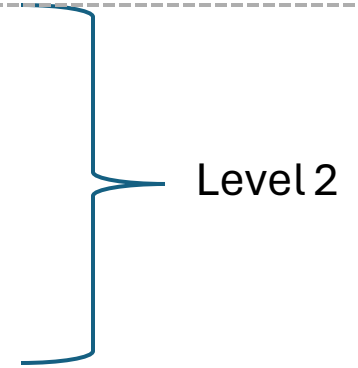
Energy

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LULUCF

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SRT
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SRT
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SRT
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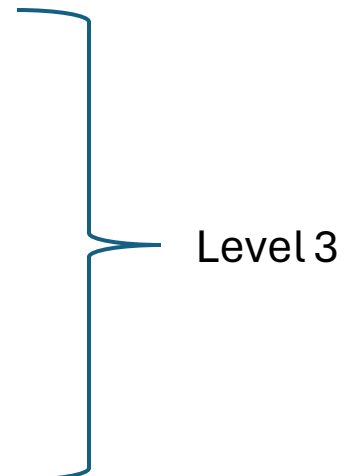
SBDT
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SBDT
Table 5.A
Table 5.B(a)
Table 5.B(b)
Table 5.C



Level 1: Cross-Cutting Tables

Table 6	Table 7	Table 8	Table 9	Table 10	Flexibility provisions
<ul style="list-style-type: none">• Indirect emissions of N₂O and CO₂	<ul style="list-style-type: none">• Key categories	<ul style="list-style-type: none">• Recalculations in the Party's inventory relative to its previous submission	<ul style="list-style-type: none">• Categories or subcategories that were not estimated• Allocated to a sector other than that indicated by the 2006 IPCC Guidelines.	<ul style="list-style-type: none">• Summary of emission trends over the entire time series (e.g. 1990–2022).	<ul style="list-style-type: none">• Summary table on the use of flexibility provisions

Other Tables	Table 9
Table 6	Table 10
Table 7	Flex Summary
Table 8	

} Level 1

Level 1: Cross-Cutting Tables

Table 6 Cross-sectoral report: Indirect emissions of N₂O and CO₂

TABLE 6 CROSS-SECTORAL REPORT: Indirect emissions of N₂O and CO₂
(Sheet 1 of 1)

Year
Submission
Country

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GREENHOUSE GAS EMISSIONS AND REMOVALS	SOURCE EMISSIONS					INDIRECT EMISSIONS	
	CH ₄	CO	NMVOC	NO _x	NH ₃	CO ₂ ⁽¹⁾	N ₂ O ⁽²⁾
	(kt)					(kt)	
Total							
1. Energy							
2. Industrial processes and product use							
3. Agriculture ⁽³⁾							
4. LULUCF ⁽³⁾							
5. Waste							
6. Other <i>(as specified in summary1)</i>							

Level 1: Cross-Cutting Tables

Table 7 Summary overview for key categories

TABLE 7 SUMMARY OVERVIEW FOR KEY CATEGORIES

(Sheet 1 of 1)

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Year

Submission

Country

Threshold used in identifying key categories ⁽¹⁾: [85][95]%

KEY CATEGORIES OF EMISSIONS AND REMOVALS ⁽²⁾	Gas	Criteria used for key source identification		Key category excluding LULUCF	Key category including LULUCF
		L	T		
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CO ₂				
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CH ₄				
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	N ₂ O				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CO ₂				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CH ₄				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	N ₂ O				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CO ₂				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CH ₄				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	N ₂ O				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CO ₂				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CH ₄				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	N ₂ O				

Level 1: Cross-Cutting Tables

Table 8 Recalculation- Recalculated data

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO ₂					
	Previous submission	Latest submission	Difference	Difference ⁽¹⁾	Impact of recalculation on total emissions without LULUCF ⁽²⁾	Impact of recalculation on total emissions with LULUCF ⁽³⁾
	CO ₂ equivalents (kt) ⁽⁴⁾			%		
Total national emissions and removals						
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						

Level 1: Cross-Cutting Tables

Table 8 Recalculation- Recalculated data

Estimate the percentage change due to recalculation with respect to the previous submission:

- Percentage change = $100 \times (\text{latest submission} - \text{previous submission}) / \text{previous submission}$

			Previous submission	Latest submission	Difference	Difference (1)
			CO ₂ equivalents (kt)			(%)
Total CO ₂ equivalent emissions with LULUCF						
Total CO ₂ equivalent emissions without LULUCF						

Level 1: Cross-Cutting Tables

Table 9 Completeness - information on notation keys

Sources and sinks not estimated ("NE") ^(1,2)			
GHG	Sector ⁽³⁾	Source/sink category ⁽³⁾	Explanation
CO ₂			
CH ₄			
N ₂ O			
HFCs			
PFCs			
Unspecified mix of HFCs and PFCs			
SF ₆			
NF ₃			

Explanation of the reason for each source/sink category for which "NE" is entered in the sectoral tables.

Explanation of the reason for each source/sink for which the notation key "IE" (included elsewhere) is used in the sectoral tables.

Level 1: Cross-Cutting Tables

Table 10 Emission trends

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Reference year/period for NDC ⁽¹⁾	Base year ⁽²⁾	1990 ⁽¹⁾	(Years 1991 to 2019)	(Years 1991 to 2019)	(Years 1991 to 2019)	2020	(Years 2021 to latest reported year)	(Years 2021 to latest reported year)	(Years 2021 to latest reported year)	Change from [1990][base year][reference year][period] to latest reported year
	kt CO ₂ equivalents (kt) ⁽³⁾										%
Total (net emissions) ⁽⁴⁾											
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											

Parties shall report a consistent annual time series starting from 1990.

Those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead report data covering, at a minimum, the reference year/period for its NDC under Article 4 of the Paris Agreement and, in addition, a consistent annual time series from at least 2020 onwards.

Thank you for your attention!

For more information:

<https://climate-transparency-platform.org/>

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**CLIMATE
TRANSPARENCY
PLATFORM**



**CBIT
GSP**