



**Partnership on Transparency** in the Paris Agreement



## Virtual webinar as a part of the workshop:

Deep-dive into preparation and reporting of results of national GHG inventories under the ETF of the Paris Agreement

## **INTRODUCTION TO COMMON REPORTING TABLES**

Khetsiwe Khumalo Advisor – Climate Transpaprency UNEP-Copenhagen Climate Center Khetsiwe.khumalo@un.org









Supported by:

Federal Ministry for Economic Affairs and Climate Action



on the basis of a decision by the German Bundestag

n



# **INTRODUCTION TO 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.

#### 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;.



# **REPORTING GHG INVENTORY UNDER THE ETF**



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. The CRTs ensure the use consistent categories and definitions by all Parties.



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

- CRTs contain the reported figures and NID contains the full description of data, methods and assumptions, source of information etc
- Set of MS Excel workbook (containing 60 worksheets) for each reported year.
- There are three types of tables for each year
  - 1. Sectoral Background Tables (orange cells)
  - 2. Sectoral Report Tables (green cells)
  - 3. Summary Tables/Cross-sectoral Tables (blue cells)

CO <sub>2</sub> Transport and storage Sheet 1 of 1)			Submission Country	TABLE 4 SECTORAL REPORT FOR LAND USE, LAND-USE (Sheet 1 of 1) Back to index	CHANGE AND FOR	ESTRY				Yes Submissio Country		SUMMARY 1 SUMMARY REPORT FOR NATIONA (Sheet 1 of 1)	. GREENHOUSE C	GAS INVENT	ORIES						54
lack to Index				GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO2 emissions/removals (1.2)	CH <sub>4</sub> <sup>(2)</sup>	N <sub>1</sub> O <sup>(2)</sup>	NOs	CO NMVOC	C Total GHG emittions/removals (1)		GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/ removals	Ii NiG	HFCs <sup>(1)</sup>	PFCs <sup>(1)</sup>	aspecified ix of HFCs SF4 ad PFCs <sup>(1)</sup>	NF3 NO	o, co N	MVOC SO <sub>1</sub>	f Total GB
REENHOUSE GAS SOURCE AND	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS	 4 TablUUUCE			(KI)			CO2 equivalents (kt) ***			(k	0	C0;	equivalents (kt)	8		(kt)		CO2 equivalent
SINK CATEGORIES	CO <sub>2</sub> transported or injected <sup>(1)</sup>	CO2	CO2 <sup>(2)</sup>	 4 A Forest land								Total national emissions and removals		_					_	_	4
	(kt)	(kg/kt)	(kt)	 4.5.1 Encent land completions from the d						_		L thergy		_	_				_	_	4
.C.1. Transport of CO <sub>2</sub>				 4.5.1. Portes and remaining overs and								1.4.1 Franz infestion		_							-
1.C.1.a. Pipelines				 4.A.2. Land converted to forest and								1.A.2. Manufacturing industries and construction							_	_	
1C1b Shine				 4.B. Cropland								1A3. Transport							_		
r.c.r.o. omps				 4.B.1. Cropland remaining cropland								1.A.4. Other sectors									
1.C.1.c. Other (please specify)				 4.B.2. Land converted to cropland								1.4.5. Other									
				 4.C. Grassland							1	1.B. Fugitive emissions from faels									/
.C.2. Injection and storage <sup>(3)</sup>				 4.C.1. Grassland remaining grassland							1	1.B.1. Solid fuels									/
1 C 2 a Injection				 4.C.2. Land converted to grassland							1	1.B.2. Oil and natural gas and other emissions from energy production									<u> </u>
1.0.2.1. 0				 4.D. Wetlands (1)							1	1.C. CO <sub>2</sub> Transport and storage							_		4
1.C.2.b. Storage				 4.D.1. Wetlands remaining wetlands								2. Industrial processes and product use							_	_	4
.C.3. Other (please specify)				 4.D.2. Land converted to wetlands								2.R. Subers industry 2.B. Cheminal industry					_		_	_	4
				 45. Settlements					_			2.C. Metaliodustry		_	-					_	
eformation item (4.5.6)				 A E 1 Sattlements remaining sattlements						_		2.D. Non-energy products from fuels and solvent use							_		-
				 (F.2.) and converted to estillation								2.E. Electronic industry									
total amount captured for storage				 4.2.2. Lano converteo to sercemento								2.F. Product uses as substitutes for ODS									
Total amount of imports for storage (7)				 4.F. Other land								2.G. Other product manufacture and use									
		Total A		 4.F.1. Other land remaining other land								2.H. Other <sup>10</sup>									/
fotal amount of exports for storage				 4.F.2. Land converted to other land								3. Agriculture									
Catal amount of CO. injected at storage sites				4.G. Harvested wood products (7)								3.A. Enteric fermentation									4
terial and one of a storage sites				4.H. Other (please specify)								3.18. Statistic management									4
O2 injected for operational usage (8)											1	3.C. For carrying									
Total leakage from transport, injection and storage				-								3.E. Prescribed human of secondals									
		Total B		Memo item:								3.F. Field turning of agricultural residues									
		Difference (4 Pt (7)		Televise and a barrent for shared distances and that (0)								3.G. Liming									
		Timoranoa (d. R)		Emissions and subsequent removais from natural disturbances on managed lands							1	3.H. Una application									



Sectoral background tables

Sectoral tables

Summary Tables

- Prepared for the electronic reporting of information in the NIR of anthropogenic emissions by sources and removals sinks of GHGs
- The CRTs contain data for all sectors and categories defined in the MPGs.
- The sources and sink definitions are based on the categorization in the 2006 IPCC guidelines.
- Parties may also add country specific categories to the CRTs





# STRUCTURE OF CRTs

Summ Sun Sun Sun	ary Tables nmary 1 nmary 2 nmary 3		Cross-cutting informa Table 6 Table 8 Table 10	tion tables Table 7 Table 9 Fexibility	Level 1
Energy SRT Table 1	IPPU SRT Table 2 (I) Table 2 (II)	Agriculture SRT Table 3	LULUCF SRT Table 4	Waste SRT Table 5	Level 2
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 <sub>1</sub> Table 2 (II) B-H <sub>2</sub>	SBDT Table 3.A Table 3.B(a) Table 3.B(b) Table 3.C Table 3.D Table 3.E Table 3.F Table 3.G-J	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

# STRUCTURE OF CRT



	(Shert I	A NOT TOKING AN POWER FOR ENTROPY .								Faa- Materia
nd Las Yand	-	TABLE I AICTORAL REPORT FOR EVENET Obset Lot D								- Control
	Early Lan. 8.5 Yearl	and the constant of the state of the	10	16	1.0	44,	16	1410	-	Tree
-	LALS					44				DJ-natiabas-Jac
	1.40	Party Inc.	-		_	-	_	-		
	1.61	3.5 Fed coasterious a drifting presents:								
	1.1.4.3	LLL3erg were	-							
=	148.4	(	-						-	
-	1.6.1	1.A.1.A. Prevenue inCome				_		-	-	
4	- 3.A.S	1.0.1. Maintener of whit fees and other serge salication	_		_					
-	1.43	113 Hard-hing televise advectories		-						
21	1183	Trib ( to fine and over				_		_		
-	1.61	. J.A.D. Ne Interaction								
-		- AAlo Damen								
14.1	12	1.A.T. I'd Poly per set pro-	_					_		-
1.1	LAAV	A-Alto Feddersmatte Smintern and Utterni								
	1.8.1	1.8   C. Nor-Antonio samula 1.4 Jup Olive								
4	1.4.4	LAA Taxaan								
11	1.4.1	1.4.1 c Debeter or Month								
		LA1A Red temperatures								
	14.	1.4.11 Petret								
	144.1	COALL Council at spring						-		
-	1.8.9	1.6.1 o Ditte transmission	-					-		
	3.A4	CAR Other today.								
	<1A	1.3.1. Countral accounts								
-	148.4	1.4.13 Resident								
	1.4.1	1.0.12 April of Deputy Dates	_							
	1.6.1	148.064								
	3 H. Fage	1.611. Summer	_			-		-		
-	181.1	TRIS MAN	_		_	-		_		
	18.	18 Young and an Annual		-		-				
	- 100			-	_			_		
			-			-			-	-
		1.0.14.1.00 Martin Bol Television				-			1	



(Shart Sol 1)

and interior

(Bloor 1 of 1)

SUMPLIES 2: SUMMARY REPORT FOR CO. DODINALENT EX

different & of 10

NUMBER OF STREET S

SUBJECTS 3 AUXIMANY NEPOSET SOR CO. DORINALIZATEM

# Normal Arrow and a set of the se

#### Sectoral Report Tables

#### Summary / Cross-sectoral / Trends Tables

Set of MS Excel workbook (containing 60 worksheets) for each reported year

# **STRUCTURE OF CRT TABLES**



# **LEVEL 3 - SECTORAL BACKGROUND DATA TABLES**

- The sectoral background data tables require detailed information on emissions, removals activity data and other relevant information at the category and subcategory level.
- 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.

IABLE 2(1).A-H SECTORAL BACKGROUN	D DATA FOR INDUSTRI	AL PROC	LOSES AND	RODUCI	USE							Yea
missions of $CO_2$ , $CH_4$ and $N_2O$												Submission
Sheet 1 of 1)												Countr
ack to Index												
REENHOUSE GAS SOURCE AND	ACTIVITY DATA		IMPLIED	EMISSION FAC	TORS <sup>(1)</sup>	I	MISSIONS	(2)		RECOVERY/C	APTURE (3.4)	
SINK CATEGORIES	Production/Consumption q	uantity	CO2	СН4	N <sub>2</sub> O	CO2	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> fossil	CO <sub>2</sub> biogenic <sup>(6)</sup>	CH4	$N_2O$
	Description <sup>(5)</sup>	(kt)		(t/t)			(kt)			(k	t)	
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 specity)												
.B. Chemical industry												
2.B.1. Ammonia production <sup>(7)</sup>												
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												
705												

# LEVEL 3 - EXAMPLE OF SECTORAL BACKGROUND DATA

GREENHOUSE GAS SOURCE AND	ACTIVITY DATA		IMPLIED	EMISSION FAC	TORS <sup>(1)</sup>	I	MISSIONS (	(2)	1	RECOVERY/C	APTURE (3.	4)
SINK CATEGORIES	Production/Consumption q	uantity	CO <sub>2</sub>	CH4	N <sub>2</sub> O	CO <sub>2</sub>	CH4	N <sub>2</sub> O	CO <sub>2</sub> fossil	CO <sub>2</sub>	CH4	N
	Description <sup>(5)</sup>	(kt)		(t/t)			(kt)		IODDI	(k	t)	-
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		<u>ل</u> +		mplied		Emic	sions	<i>k</i> +	Roc	overv	/canti	iro
2.A.4. Other process uses of carbonates	Activity uata,	KL -	Emic	cion Ea	ctor	LIIIIS	SIULIS,	κι	nec	overy,	rcapti	JIE
2.A.4.a. Ceramics			LIIIIS	sion rat						k	t	
2.A.4.b. Other uses of soda ash				t/t								
2.A.4.c. Non-metallurgical magnesium production												
2.A.4.d. Other (please specity)												
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												

# 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								Year
(Sheet 1 of 1)								Submission
Back to Index				_				Country
	-00	CH.	N-0	NO	00	NMVOC	50-	Total CHC emissions (1
GREENHOUSE GAS SOURCE AND SINK CATEGORIES		CII4	1120	(he)		MAVOC	.50X	CO
5. Total waste				(KI)				CO <sub>2</sub> equivalents (kt)
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	CUC		1		NOx, C	CO,		Tatal CUC
5.B.2. Anaerobic digestion at biogas facilities	GHG	emissions	, κι		NMVOC	and		IOLAI GHG
5.C. Incineration and open burning of waste					sov l	2+		CO2 eq.
5.C.1. Waste incineration					30x, I	κι		
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: <sup>(3)</sup>								
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)							

# SUMMARY AND CROSS-CUTTING TABLES

• Level 1 - These tables covers a wide range of summary and cross-cutting information including;



The summary tables as well as many of the cross-cutting tables which contains higher level information are automatically completed by the reporting software based on data provided in the background tables (level 1)

## Summary 1 Summary Report for national GHG inventories

"Total GHG emissions/removals" include CO2, CH4, N2O, HFCs, PFCs, unspecified mix of HFCs and PFCs, SF6, NF3 100-year time-horizon GWP values from the IPCC Fifth Assessment Report, or 100-year time-horizon GWP values from a subsequent IPCC assessment report

## SUMMARY 1 SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (Sheet 1 of 1)

Year Submission Country

#### Back to Index

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO <sub>2</sub> emissions/ removals	CH <sub>4</sub>	N <sub>2</sub> O	HFCs <sup>(1)</sup>	PFCs <sup>(1)</sup>	Unspecified mix of HFCs and PFCs <sup>(1)</sup>	$SF_6$	NF3	NO <sub>x</sub>	со	NMVOC	sox	Total GHG emissions/removals <sup>(2)</sup>
		(kt)		CO <sub>2</sub>	equivalents (	kt) <sup>(3)</sup>			(k	tt)			CO2 equivalents (kt) <sup>(3)</sup>
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 <sub>2</sub> Transport and storage													

## Summary 2 Summary Report for CO2 eq. emissions

## SUMMARY 2 SUMMARY REPORT FOR CO<sub>2</sub> EQUIVALENT EMISSIONS (Sheet 1 of 1)

Back to Index Unspecified mix of CO<sub>2</sub><sup>(1)</sup>  $CH_4$  $N_2O$  $SF_6$ NF<sub>3</sub> HFCs **PFCs** Total HFCs and GREENHOUSE GAS SOURCE AND PFCs SINK CATEGORIES CO2 equivalents (kt ) (2) Total (net emissions)<sup>(1)</sup> 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. CO2 transport and storage

Year Submission

Country

## Summary tables



Memo items: (3)					
1.D.1. International bunkers					
1.D.1.a. Aviation					
1.D.1.b. Navigation					
1.D.2. Multilateral operations					
1.D.3. CO <sub>2</sub> emissions from biomass					
1.D.4. CO <sub>2</sub> captured					
5.F.1. Long-term storage of C in waste disposal sites					
Indirect N <sub>2</sub> O					

	Indirect CO <sub>2</sub> <sup>(4)</sup>
--	---

Total CO <sub>2</sub> equivalent emissions without LULUCF
Total CO. conviralent emissions with LULUCE

## SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED

#### Back to Index

GREENHOUSE GAS SOURCE AND SINK	C	O <sub>2</sub>	C	H₄	N	20	HF	<sup>-</sup> Cs	PI	FCs	Unspecif HFCs a	ied mix of nd PFCs	S	F.	N	F,
CATEGORIES	Method applied	Emission factor	Method applied	Ernission factor	Method applied	Ernission factor	Method applied	Emission factor								
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. CD₂ transport and storage																
2. Industrial processes																
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																

Yea

Submission

Country

Table 6	Table 7	Table 8	Table 9	Table 10	Flexibility provisions
<ul> <li>Indirect emissions of N2O and CO2</li> </ul>	Key categories	• Recalculations in the Party's inventory relative to its previous submission	<ul> <li>Completeness and information on notation keys</li> </ul>	• Summary of emission trends over the entire time series (e.g. 1990– 2022).	<ul> <li>Summary table on the use of flexibility provisions</li> </ul>

## Table 6 Cross-sectoral report: Indirect emissions of N<sub>2</sub>O and CO<sub>2</sub>

#### TABLE 6 CROSS-SECTORAL REPORT: Indirect emissions of N<sub>2</sub>O and CO<sub>2</sub> (Sheet 1 of 1)

Submission

Back to Index

		SOU	INDIRECT EMISSIONS				
GREENHOUSE GAS EMISSIONS AND REMOVALS	CH <sub>4</sub>	со	NMVOC	NOx	NH <sub>3</sub>	CO <sub>2</sub> <sup>(1)</sup>	N <sub>2</sub> O <sup>(2)</sup>
			(kt)				
Total							
1. Energy							
2. Industrial processes and product use							
3. Agriculture <sup>(3)</sup>							
4. LULUCF <sup>(3)</sup>							
5. Waste							
6. Other (as specified in summary1)							

Year

Country

## Table 7Summary overview for key categories

## TABLE 7 SUMMARY OVERVIEW FOR KEY CATEGORIES (Sheet 1 of 1)

Back to Index

Year Submission Country

Threshold used in identifying key categories <sup>(1)</sup>: [85][95]%

KEY CATEGORIES OF EMISSIONS AND REMOVALS (2)	Gas	Criteria used for key source identification		Key category excluding	Key category including
		L	Т	LULUCF	LULUCF
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CO <sub>2</sub>				
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	CH4				
1.A.1 Fuel combustion - Energy Industries - Liquid Fuels	N <sub>2</sub> O				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CO <sub>2</sub>				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	CH4				
1.A.1 Fuel combustion - Energy Industries - Solid Fuels	N <sub>2</sub> O				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CO <sub>2</sub>				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	CH <sub>4</sub>				
1.A.1 Fuel combustion - Energy Industries - Gaseous Fuels	N <sub>2</sub> O				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CO <sub>2</sub>				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	CH <sub>4</sub>				
1.A.1 Fuel combustion - Energy Industries - Other Fossil Fuels	N <sub>2</sub> O				

## Table 8 Recalculation- Recalculated data

GREENHOUSE GAS SOURCE AND SINK CATEGORIES			С	02		
	Previous submission	Latest submission	Difference	Difference <sup>(1)</sup>	Impact of recalculation on total emissions without LULUCF <sup>(2)</sup>	Impact of recalculation on total emissions with LULUCF <sup>(3)</sup>
	со	2 equivalents (k	<b>t</b> ) <sup>(4)</sup>		(%)	
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						
1.C. $CO_2$ transport and storage						

Table 8 Recalculation- Recalculated data

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

• Percentage change = 100 x (latest submission–previous submission)/previous submission

	Previous submission	Latest submission	Difference	(1)
	CO <sub>2</sub>	equivalents (kt)		(%)
Total CO <sub>2</sub> equivalent emissions wit	h LULUCF			
Total CO <sub>2</sub> equivalent emissions wit	hout LULUCF			

 Table 9 Completeness - information on notation keys

Sources and sinks not estimated ("NE") <sup>(1,2)</sup>										
GHG	Sector <sup>(3)</sup>	Source/sink category <sup>(3)</sup>	Explanation							
CO <sub>2</sub>										
$CH_4$										
N <sub>2</sub> O										
HFCs										
PFCs										
Unspecified mix of										
HFCs and PFCs										
SF <sub>6</sub>										
NF <sub>3</sub>										

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.

#### Table 10 Emission trends

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Reference year/period for NDC <sup>(1)</sup>	Base year	<b>1990</b> <sup>(1)</sup>	(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][refer ence[year][ period]] to latest reported year
Total (net emissions) <sup>(4)</sup>											/0
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.

Summary table on flexibility provisions

This table is used on a voluntary basis.

MPG flexibility provision	Year	Sector	Category	Gas	Description of the application of flexibility	Clarification of capacity constraint	Timeframe for improvement	Progress made in addressing areas of improvement

#### TABLE 3.E SECTORAL BACKGROUND DATA FOR AGRICULTURE

Prescribed burning of savannahs									Submission	
(Sheet 1 of 1) Back to Index									Country	
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTI	IVITY DATA AND OTHER	RELATED INFO	RMATION		IMPLIED H FACT	FACTORS EMISSIONS (1)			
	Area of savannah burned	Average above-ground biomass density	Fraction of savannah burned	Biomass burned	Nitrogen fraction in biomass	CH4	N <sub>2</sub> O	CH4	N <sub>2</sub> O	
	(kha/yr)	(t dm/ha)		(kt dm)		(kg/t	t dm)	(k	it)	
<b>3.E.1. Forest land</b> (specify ecological zone) <sup>(2)</sup>										
3.E.2. Grassland (specify ecological zone) (2)										

(1) Parties that wish to do so may report CH<sub>4</sub> and N<sub>2</sub>O emissions from burning of organic soils in savannahs here. N<sub>2</sub>O emissions from burning of organic soils may only be included if higher-tier methods are used.

<sup>(2)</sup> Emissions from forest and grassland fires can be reported under category 4(IV) in accordance with the 2006 IPCC Guidelines. Emissions from fires on forest land and grassland defined as savannah may be separately identified and reported here. In this case, this should be clearly documented in the documentation box and in the national inventory document (NID). Parties should avoid double counting with emissions reported in CRT tables 3.E and 4(IV).

Note: Minimum level of aggregation is needed to protect confidential business and military information, where it would identify particular entity's/entities' confidential data.

#### Documentation box:

Parties should provide a detailed description of the agriculture sector in chapter 5 ("Agriculture" (CRT sector 3)) of the NID. Use this documentation box to provide references to relevant sections of the NID, if any additional information and/or further details are needed to explain the contents of this table.

• Some CRTs contain:



- 1. Documentation boxes with background information and relevant references to the NID
- 2. Footnote guidance

Year

# FLEXIBILITY

- Developing country Parties that need flexibility in the
  - light of their capacities may;
    - a) Use the new notation key "FX" (Flexibility)
    - b) Collapse relevant rows, columns where they have applied flexibility
    - c) Collapse tables related to the four additional gases (e.g. if they do not have capacity to report \*on HFCs, PFCs,SF6 or NF3).
- The Party should explain in any corresponding documentation boxes their application of flexibility



# IMPORTANT TO NOTE...

- Parties prepare the CRTs using a reporting tool developed by the UNFCCC Secretariat.
- CRTs are not a GHGI estimation tool
- They are tables in which Parties report their already estimated GHG emissions/removals, and related information



# Summary

- The CRTs essentially contains the emissions and removals numerical data used in the calculations, whereas the NID describes how those emissions and removals estimates were obtained.
- In the CRTs, unshaded cells show data completed by Parties, in the grey shaded cells information is not expected to exist or be provided; and colored shaded cells are automatically completed by the software when Parties submit their data
- In the CRTs unshaded cells should be completed with either data (numbers) or notation keys to meet the completeness requirements.
- The CRTs can be split into three distinct levels of aggregation:
  - 1. sectoral background data tables (level 3)
  - 2. Sectoral reporting tables (level 2)
  - 3. Summary and cross-cutting tables (Level 1)
- The CRTs are generated by the UNFCCC GHG inventory reporting tool





copenhagen climate centre

# Thank you for you attention!

Khetsiwe Khumalo Advisor - Climate Transpareny UNEP CCC Khetsiwe.khumalo@un.org

