

United Nations Climate Change

Hands-on Training ETF GHG Inventory Reporting Tool

Nashib Kafle Transparency Division UNFCCC Secretariat Bogota, 23-25 July 2024



Agenda

- Introduction
 - Reporting requirements under the Paris Agreement
 - Common Reporting Tables (CRT)
 - Development of the ETF Reporting Tools
- Hands-on Training on ETF GHG Inventory Reporting Tool
- Interoperability with IPCC Software
- Participants' interaction and question/answers
- Future implementation



Session background and objectives

Training session

- ETF GHG Inventory Reporting Tool for common reporting tables (CRT) for the electronic reporting of the information in the national inventory reports of anthropogenic emissions by sources and removals by sinks of greenhouse gases
- Hands-on training session to provide a practical experience of the use of tool and its features developed so far

At the end of the training session, the participants will be able to:

- ✓ Access to the ETF Reporting Tools
- ✓ Get familiar with the user interface
- ✓ Create a new inventory version
- ✓ Specify/Edit version settings
- ✓ View and access all inventory versions
- ✓ Customize the categories to report
- Add and modify data in the application
- Export/import of data entry grids in Excel
- ✓ Working with Comments and NK explanation
- ✓ Generate/download common reporting tables
- Work with JSON and interoperability with IPCC Software

Objective

Background



Introduction



United Nations Climate Change

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

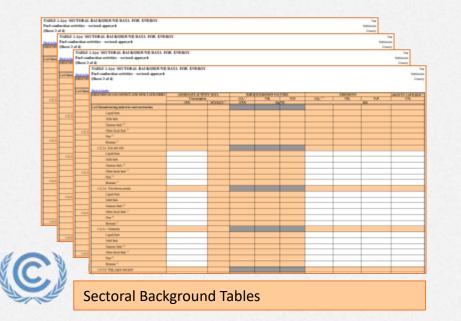
1. Adopts:



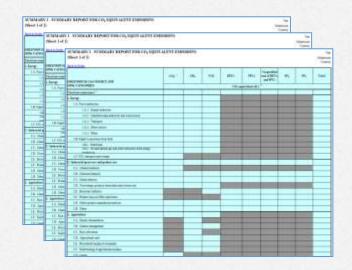
(a) The **common reporting tables** referred to in chapter II of the annex to decision 18/CMA.1 for the electronic reporting of the information in the national inventory reports of anthropogenic emissions by sources and removals by sinks of greenhouse gases, as contained in annex I;

Common Reporting Tables (CRT)

- Prepared for the electronic reporting of information in the NIR of anthropogenic emissions by sources and removals sinks of GHGs
- Set of MS Excel workbook (containing 60 worksheets) for each reported year
- There are three types of tables for each year
 - Sectoral Background Tables (white/orange cells) Need to fill data at this layer
 - Sectoral Report Tables (green cells) Automatically generated
 - Summary Tables/Cross-sectoral Tables (blue cells) Automatically generated



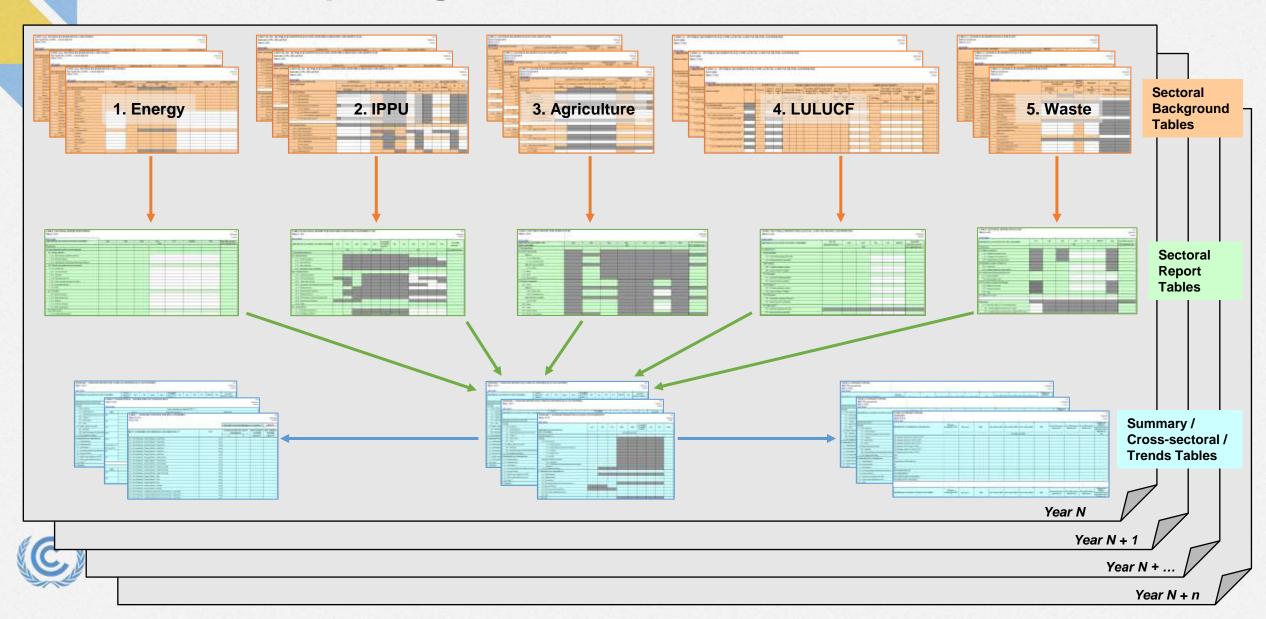
		LIL REPORT FOR EVERLY							1000	
	29								- Passi	
and the owned	Hant J.	A DE TANLEL REPERT FOR EPERKY af la								10
		77								- Common
1.340	And Sold	TABLE 1 42CTOBAL REPORT FOR EVERALS								
141.8	1000	(filant 3 of 8)								19
	Surfix	1								
	14.840	CALIFORNIA CALIFORNIA COMPANY AND	1	- Dk - 1	14		100	Taul Int.	14	[heldson
	141.8	Chie								10.000
101.0	KB1+	1.3 M representation or stati grande								-
-141	1.04	101 forg where						-		
	141	1214 Fire desires affect and an	-							
	181%	1011 000000000	-		-					
	-142	1511 Hardren of All Solution and Long Street,								
LEL	1.8.8	141 Magintellar Islands (all addition								
144	FOF	-141a darament								-
185	141	1111 Parliance and								-
1.41.8	14.1	COLD PRODUCT								
1.91	145	Calif Pat over entering								
141	1.41.4	LELL Fadoromay bring carrients								
181	1.01	1007						-		
	1.81	115g liter								
144	La1	A 40 Blogged								
199.00	100	1011-8000-000								
1.0.1	1.0.1	1.513 find methods								
184	1.44.10	Lills Balager								
1.44 %	1.84	LITTER States to good						-		
181	-1.8.1.	1111 Hermanne								
121	100	Tax Me went								
2 has	1.64 %	Late representation of the						-		
181.0	1185	LLLA Anomal								
141	141	1011 (4000 (000) (000)	-	_						
18.0	L Argen	1.04 Mar.	-							-
	181.10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_				_			
	141	TATE LASE.		_					-	
	18.0	2. Angline statione that Auli				_	_		_	-
		181 Natrian	-						_	-
		Citita Catherine wat her live								



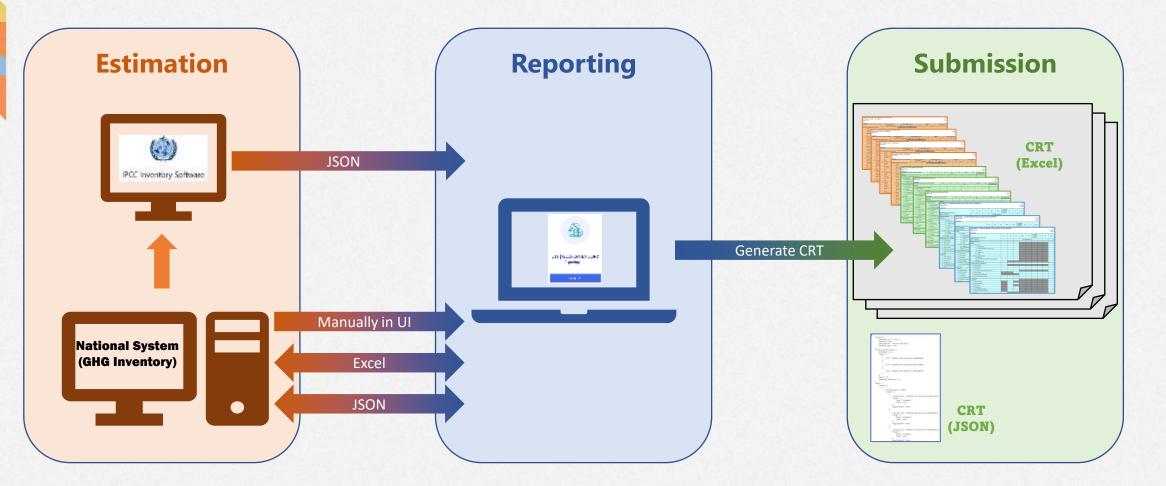
Sectoral Report Tables

Summary / Cross-sectoral / Trends Tables

Common Reporting Tables worksheets



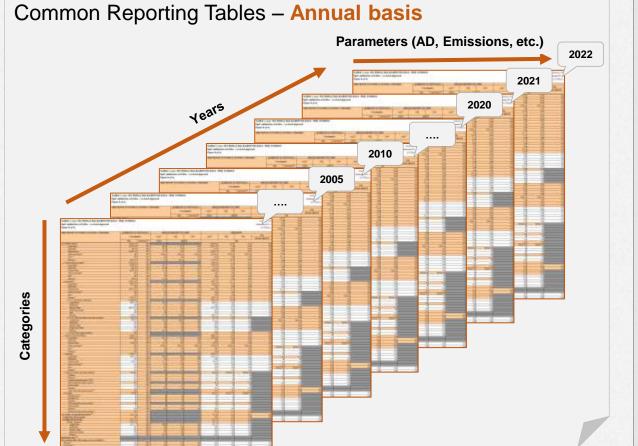
GHG inventory workflow

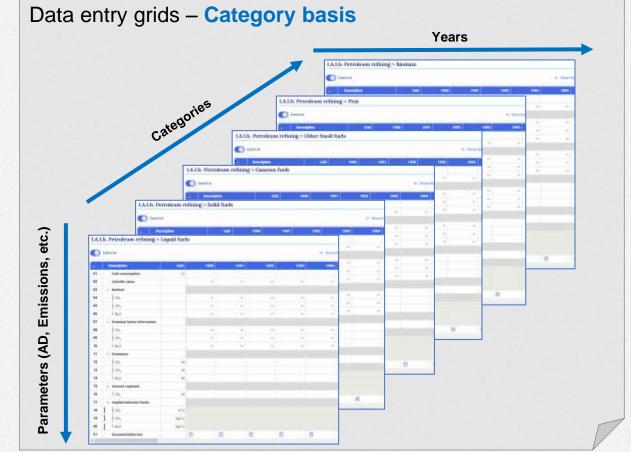




Common Reporting Tables and Data entry grids

Data entry grids have categories for all sectors arranged in navigation tree and allows to enter data for the whole time series for a selected category. The data from the data entry grids are mapped to the CRTs on an annual basis when you generate/download the reporting tables.





Hands-on Training



United Nations Climate Change

Housekeeping rules for the training

- 1. For this training session, access is provided to the training version of the GHG Inventory Reporting tool.
- 2. The secretariat will demonstrate the features of the GHGI Reporting tool. **During the demonstration, please refrain from using the tool.**
- 3. Please start working on the exercise only when you are asked to do so. Sufficient time will be allotted to perform exercises.
- 4. Please feel free to ask questions while performing the exercises.
- 5. Please **DO NOT** use the training version of the ETF Reporting Tools to begin your GHG inventory submission.





nited Nations

Use of icons in the presentation

6

This icon denotes that the box contains useful information.



This icon signifies that there will be a hands-on exercise on a particular feature of the GHG Inventory Reporting Tool. Each exercise is associated with a number. e.g., E1



The slide with this icon is for information. The feature will be demonstrated during the training, but there will not be any corresponding exercise.





Go to the web link



Scan the QR code for exercise guide

https://etf-ghg-training.unfccc.int

Enter your email address (registered for this training) and click on Next

Click on Send Code

Check your email for the verification code

In the log-in window, enter the code and click on Sign-in



List of exercise for the training

- Exercise 1: Creating an inventory version and specifying version settings
- Exercise 2: Customizing navigation tree (categories for reporting)
- **Exercise 3**: Data entry (manual data entry)
- **Exercise 4**: Data entry (Excel export/import)
- Exercise 5: Editing version setting(s)
- Exercise 6: Working with comments, NK explanations
- **Exercise 7**: Generation/download of reporting tables
- Exercise 8: Working with JSON and interoperability with IPCC Software



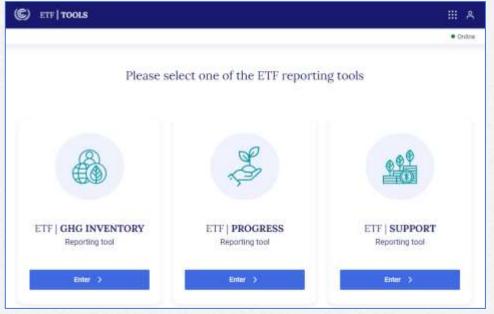
ETF Reporting Tools login

Weblink to access the ETF Reporting Tools <u>https://etf-ghg-training.unfccc.int</u>



Username: [Email address (registered for this training)]

Follow on-screen instruction to get the code in your email





United Nations *!!! UNFCCC will provide username and password if you do not have one yet. It can be only used during the training.!!!*

Creating an inventory and version settings (1/2)

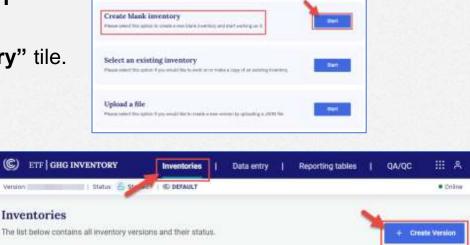
- 1. Click "Enter" on the "ETF | GHG INVENTORY Reporting tool" tile.
- 2. Click on "Start" in the "Create blank inventory" tile.

If you are in the "Data entry" tab

- 1. Click on the "Inventories" tab
- 2. Click on "+ Create version" and follow the steps above.
- 3. Select "Year" for which you want to submit the inventory.
- 4. Toggle on "**Default version**" to make this the default working version for all users within your Party.
- 5. Click "Create Inventory >"



```
United Nations
Climate Change
```



Please select an option to start working on an inventory

Please select year and versio	on type to start working on a version
Select the submission year	
The submission year will be reflected in the in ou may edit the submission year later	wentory name
- Year	
2024 🛩	
Set as default version	
Nexts select this uption to make this the def by change the default version later.	auit working version for all users within your Party. You
Default version	
Constant version (45)	*
	Cancel Create Inventory >

Creating an inventory and version settings (2/2)

- 1. Select "**No**" if your Party does not want to apply flexibility provisions.
- 2. Select **"Yes"** if your Party wants to apply flexibility provisions, and you can select the specific flexibility provisions.
- 3. Click on "Next" until you complete all version settings
- 4. At the end of version settings, you can enter the "Data entry" page

ersion Settings	
Flexibility provisions Canante	1 Flexibility provisions
Energy	Pieuce specify if are flexibility provisions in light of national capacities will be used. Tos No
) IPPU	Note: Notation key: "FA" cam only be sand in data with when the blocking provisions are used.
Agriculture	2 Select the specific flexibility provisions to be used
) LULUCE	Para 58 (Enables to set the last reporting year as submission year minus 3 in the time series) 💮 💽
	Para 57 (Allows to select the reporting years in the time-series including the NDC reference year/pariod, if applicable) ①
	Specify NDC reference yearspectad*
	🐞 MDC reference year 🛛 MDC reference percel 📋 Dis net specify MDC reference year (period
	C RE many an
	2005
	Select The reporting yours in the time-select
	manality on referenced Annual to pay processions.
	2008
	288. 8
	Para 48 (Reporting HFCs, PFCs, SF4 and NF1) (9)
	Enabling the approx will allow to apply Reobility for the selected P gauges)

E1





Flexibility provisions

Flexibility provisions (Annex to decision 18/CMA.1)	Flexibility provisions for those developing country Parties that need it in the light of their capacities.
Para. 25 (Key category analysis)	Identify key categories using a threshold no lower than 85 per cent (instead of 95 per cent)
Para. 29 (Uncertainty assessment)	Provide qualitative discussion of uncertainty for key categories both latest inventory year/ trend, instead of quantitatively estimating and qualitatively discussing uncertainty for all categories for at least the starting year and the latest reporting year and the trend.
Para. 32 (Insignificance threshold)	Consider emissions insignificant if the likely level of emissions is below 0.1 per cent of total GHG emissions, excluding LULUCF, or 1,000 kt CO2 eq, whichever lower (as opposed to 0.05 per cent or 500 kt CO2 eq). Total emissions for all gases from categories considered insignificant shall remain below 0.2 % total GHG emissions, excluding LULUCF, as opposed to 0.1 per cent.
Para. 34 (QA/QC plan)	Encouraged to elaborate an inventory QA/QC plan including information on the inventory agency responsible for implementing QA/QC (as opposed to a requirement to develop a QA/QC plan).
Para. 35 (QC procedures)	Encouraged to implement and provide information on general inventory QC procedures in accordance with their QA/QC plan (as opposed to required to implement and provide information).
Para. 48 (Reporting F-gases)	Report at least 3 gases (CO2, CH4, and N2O). Also, any of the 4 gases (HFCs, PFCs, SF6, and NF3) included in NDC under Art. 4 or that are covered by activity under Article 6 or have been previously reported (as opposed to reporting all 7 gases)
Para. 57 (Annual time series years)	Report data covering the reference year/period for the NDC and, in addition, a consistent annual time series from at least 2020 onward (as opposed to reporting a continuous time series from 1990 onwards).
Para. 58 (Last year in time series)	The latest reporting year shall be no more than 3 years prior to submission of the inventory (as opposed to no more than 2 years for all other Parties)

Exercise: Creating version and specifying version settings

Exercise 1a:

- Login to the application using the weblink: https://apps-training.unfccc.int
- Create a new inventory version for the submission year 2025
- Select "Yes" to apply flexibility provisions
- Select para 58 flexibility provisions
- Select para 57 flexibility provisions and select 1990, 2000, and 2010

Exercise 1b:

- Go through the version settings for Energy and IPPU, and do not select any settings
- Go to the version setting for the Agriculture sector
- Select "Option B (country-specific)" for the cattle categorization
- Select "Approach C" in the LULUCF sector
- Click on "Go to data entry"



Scan the QR code for exercise guide



User Interface of GHG Inventory Reporting Tool

- Inventories To start a new inventory and to configure the properties relating to the inventory, such as submission year, sectors, options and years to be included in the inventory
- Data entry For entering and/or editing data in the data entry grids
- □ **Reporting tables** For viewing reporting tables in Excel, in the format of the agreed CRT, for a particular year
- QA/QC Placeholder for various types of QA/QC (not implemented yet)
- Version Unique name of the version you are working on (ISO code, Tool, Submission year, version number)
- Status State of the inventory (e.g., Initiated, Started, QA/QC, Approved, Submitted)
- Default Flag to indicate the common version that all users within a Party are working
- Data synchronized Shows the status of data synchronization
- > Online Indication if the user is Online or Offline
- Navigation tree CRT category tree as agreed in Annex I to decision 5/CMA.3
- Data entry grids Grids for entering data

Version: XYZ-CRT-2024-V0.4 Stelue: 💪 Started 🖾 DEFAULT					S Date sy	echronized .	Online
Navigation tree		b. Petroleum refining > L	iquid fuels			Data entry	grid
Sectors/Totals	Ø	Espand wi			 Show/Nide year 	n D Expo	ñ
✓ 1. Energy			07370.5	0093	cosee a		-
~ 1.A.Fuel combustion activities (sectoral approach)		Description	Unit	1990	1991	1992	
~ 1.A.1. Energy industries	01	Fuel consumption					
	02	Calorific value					
1.A.1.a. Public electricity and hest production +	03	V Method					
 1.A.T.b. Petroleum refining 	04	CO ₃					
+ Liquid fuels	05	CH4					
j. Solid fuels	06	LN,0					
1 Gaseous fuels	07	 Emission factor information 					
Other fossil fuels.	08	- CD2					
i Peat	09	CH4					
Service -	10	L _{N2} O					
4 Biomass	11	 Emissions 					
1 A.1.c. Manufacture of solid fuels and other + energy industries	12	- CO ₂					
> 1.A.2. Manufacturing industries and construction	13	- CH4					
	14	L N ₂ O					
> 1.A.3.Transport	15	 Amount captured 					
> 1,A.4. Other sectors	16	L co _a					
> 1.A.5. Other (not specified elsewhere)	17	 Implied emission factor 					
> Information item	10	- co,					
> 1.A(b).CO ₂ from fuel combustion activities (reference approach)	19	СН					
3.A(c). Comparison of CD ₂ emissions from fuel combustion	20	L N ₂ O Documentation box			e i	Ð	12
> 1.A(d). Feedstocks, reductants and other non-energy use of fuels	¢ [>
> 1.8. Fugitive emissions from fuels	D	Comments		Footnotes			



Customizing navigation tree – Adding country-specific category

- Click on the "Data entry" tab. 1.
- 2. Click on ">" to expand the tree node (category) and "v" to collapse the tree node.
- Click on "+" sign next to the category name to add a sub-category 3.
- Select an item from a dropdown list where the predefined sub-category is available 4.
- 5. OR Enter a country-specific category where the node name says "please specify"

Navigation tree : Optio	ns	El Navigation tree + Options	1.A.2.g.viii. Other (please s	specify)
	1.A.1.a.iii. Heat plants	~ 1.4.2. Manufacturing industries and construction	Expand all	≱ Autofil with "NA" ← Show/hid
Sectory Totals	Expand all	> 1.4.2.a. iron and steel > 1.4.2.b. Non-ferrous metals	Orscription Orscription V Fuel consumption	Unit 1990
 1.A. Fuel combustion activities (sectoral approach) 	ID Description	> 1.A.2.c. Chemicals > 1.A.2.d. Pulp, paper and print	02 Liquid fuels 03 Solid fuels	
✓ 1.A.1. Energy industries	01 V Fuel consumption	T.A.Z.e. Food processing, beverages and tobacco T.A.Z.f. Non-metallic minerals	04 Gaseour fuels 05 Cither fossil fuels 06 Peat	
 1.A.1.a. Public electricity and heat production 1.A.1.a.i. Electricity generation 	+ 02 - Liquid fuels	√ 1.A.2.g. Offwir 1.A.2.g. vill. Other (please specify) + □	07 L Biornass 08 L V Calorific value	
> 1.A.1.a.iii. Heat plants	1.A.1.a.i. Electricity generation	> 1.A.3. Transport > 1.A.4. Other anctors Add new Chierce		×
1.A.1.b. Petroleum refining 1.A.1.c. Manufacture of solid fuels and other	1.A.1.a.ii. Combined heat and power generation	1 A 5, Other (not specified elsewhere) Test information item		
energy industries	1.A.1.a.iii. Heat plants	 1.A(b). CO₂ from fuel combustion activities (reference approach) 1.A(c). Comparison of CO₂ emissions from fuel combustion 	Ta V Method	ncel Add new



imate Chana

Customizing navigation tree – Editing/deleting country-specific category

Editing user-specified category

- 1. Click on the added category and click on the pen icon to edit the child node name
- 2. Rename the child node and Click 'Save name' to confirm rename.

Deleting country-specific category

- 1. Click on the added category and click on the bin icon to delete the child node.
- 2. Click "Delete" to confirm the deletion.

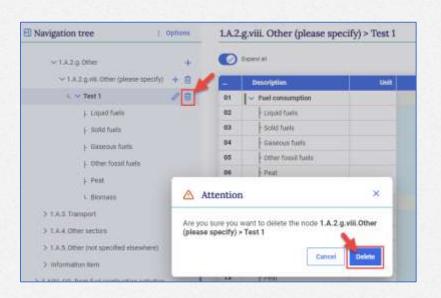
Note: Only the node/category that you have added can be deleted.

!!! Deletion of the node also deletes all data added for that category. !!!

E Navigation tree	Options	1.A.2.g.viii. Other (please spec	cify) > Test 1
~ 1.4.2 g. Other	+	Expans al	
~ 1.A.2.g viii. Other (please	speci + 🗊	- Description	Unit
4 😒 Test 1	0	01 V Fuel consumption	
) Exquid fuels) Solid fuels) Gasocus fuels) Other fossil fuels	Edit node Test 3		×
∔ Peat + Biomasis		Cancel	Save name



United Nations	
Climate Change	



Exercise: Customizing navigation tree (categories for reporting)

Exercise 2a:

• Find child node "1.A.4.c.iii. Fishing > Gasoline" in the navigation tree

Exercise 2b:

 Add user-specified node "5.A.2. Unmanaged waste disposal sites > Less decomposable wastes"

Exercise 2c:

- Add user-specified node "3.A.1.A.iv. Other (please specify) > Famous cow" and "3.A.1.A.iv. Other (please specify) > Sad cow"
- Rename "Sad cow" to "Happy cow"

Exercise 2d:

Delete user-specified node "3.A.1.A.iv. Other (please specify) > Famous cow"



Scan the QR code for exercise guide





Data entry in GHG Inventory Reporting Tool

Three ways of data entry

- ✓ Manual input into the data entry grids
- ✓ Partial or full import of data using MS Excel
- ✓ Bulk import of data using JSON
 - For connecting with the national system
 - For importing data from IPCC Software

Data are saved automatically in the database in real-time

Copy and paste including drag and drop of data in data entry grids

□ Automatic data entry validation

- ✓ Either a number or a notation key (NO, NA, IE, NE, C, FX)
- \checkmark The notation keys entered in a year propagate to the subsequent years
- ✓ Number to be separated by a dot (".") to signify a decimal point
- \checkmark Number should be between 0 and 1 where fractions are required
- \checkmark Number should be between 0 and 100 where the information required is in %
- ✓ Text can be entered as needed to report e.g., AD description (in 1.B.2)

United Nations Climate Change

Manual data input

Manual data entry can be done in the data entry grids of each category in the navigation tree. Color codes are used in the data entry grids:

- White The user can enter data
- Green Data are automatically calculated by the application
- Brown Formula in these cells are overwritten with user-entered data
- Blue Value cross-referenced
- Grey No input necessary
- Dropdown Data can be selected from the dropdown list
- 1. Click on the "Data Entry" tab.
- 2. Navigate to a node (category) in the tree by using the ">" sign.
- 3. Click on the node (category) to display the data entry grid.
- 4. In the data entry grid, provide the required information in the corresponding cells (for one year), such as AD and emissions.

Values in green cells with formulas, e.g., implied emission factor, are automatically calculated.

E Navigation true	14	.1.b. Petroleum refining > I	Iquid fuels)				
Decises, Falala							function press	B Austi
v Linegr	1.6	and the second se		7163	1991	1945		1895
~ 1 A. Tott compatible addeded perform (perform approach)	1.1	A DECEMBER OF	- 11	123,400,000	2000	1.199		2,6940
= 1.4.1 Deep adurtee	87	Talothe value		Mix w	~	~		4
3 1.8.1.8 Millio evolucits addient protection	10	+ Melhod		10000			-	-
- LAJ & Petrolage redward	.64	1-m.		8 V.	~		1.4	-
() Upperform	10	96		initi v !	*	-	+	-
/ Solt hait	10	1 160		The w	-			-
1. Second Table	87	 Extension factor information 						
1 Ober treat task	10	• m1		8.41				-
1 for	.09	0%		C3	+		1 in 1	-
	. 18	l na		tion or 1	-w)			
1 Bornes	-11	- Etilishaa						
3.4.7.2. Manufaction of solid Salic and other storing industries +	12	00.0	-	.4301.09				
2 1.4.2 Memberlankying instations and construction	- 13	0%	. 64	20.09				
3 LK3 Tanger		N. 114	. 10	1.41			_	
5 1.4.4 (the second	15							
3 1.4.1.00ar/pot specified sheehers)	- 14	- 1-10	1	- 10	182.1	- MD	181	1110
3 Adamatas ten								
3 1 AUX CO. From Val construction activities before a summaria			eth	31.00	90	90	HO	(993
1.1 App comparison of 125, strainguist from hard constanting		1. 1	eg/Cr Au/Cr	11.50				
I 1 Add. Predmicing, reductions and other non-energy are of failty	100	Taxanterdation bea		El millo NW E	0 00	01	1	-
9 1 8: Yeaphive dominances have failing	1	in the state of the later	-					11
3-142-00y/compart and younge								
3 1.1 Alexandri Marine								
> 2 Industrie process and predictions	1	2 Caratante			T. Pormalan			



Disabling automatic aggregation

- The GHGI-RT automatically aggregates the data from the sub-categories to the sector and then to the national totals. It is possible to disable automatic aggregation in the following cases:
- Disaggregated data is not available
- Emission data reported for at least one direct subcategory is the notation key 'C' (confidential) or 'FX' (flexibility)

Disaggregated data not available

- 1. Click on the "Data Entry" tab.
- 2. Select a category that do not have information on subcategories level.
- 3. Do not add any subcategories for that category.
- 4. Enter the data in the green cells (i.e., overwriting formulas).
- 5. Entering data in green cells is only possible when the category to which the grid with green cells belongs does not have any subcategories.
- 6. Once the green cells are overwritten, the shading on the cells becomes brown, making it easy for users to identify the cells where formulas have been overwritten.

Version XVZ-CRT-20024-98.84 Hollow 🖆 Blarted								C Data tyr	tronini [+)
El Navigation tree 1 Option	- 1.A	1.c.	Manufacture of solid	d fuels and oth	er energy in	dustrics			
Beckpro/Totale	1 0) Exp	etil					· Downlinds years	D Rigio
~1 finegy		1	Description.	tinda	1990	1991	1912	1993	1994
 T.A. Faal combustion activities (section) approach) 	-	1	· Fail streamption	10	5.667.87	585.58	8,850,48	NAJNEJKO .	NAMENS
~ 1.4.1 Energy industries	02	1	Uquid turis		3,422.85		100020100		
) 1.4.1.a Public electricity and heat production +	03	1	Solid faels		- 234.88				
> 1.A.1.8. Ferroleum refining	04	i	Geoeroun fueta	υ.	NO	NO C	NO .	NU .	NO
(1.A.1.o. Manufacture of solid hoch and other energy industries) +	05	1	Other Tossill faels	U.	HE 2	HE T	NE T	HE T	ŅĒ
> 1.4.3 Manufacturing industries and construction	00	1	Peat	τ.	NA .	NA .	NA .	NA .	NR
> 1.4.3.Themport	107 States	I	É flicmes	- tu (£ 1	e :	e (÷ .	10
1000 BOD	80 DS	1-	Cutorific value		WCV	NCY	REY	REV	, NCV
3 1.A.4. Uther sectors	09	1	} Liquid fuets		NCV ~	ser~	NOV~	NOV ~	NOV ~
> 1.A.5. Other that specified elsewhere)	10	T	Sold fuels			~			
3 information item	11	1	- Generous fuels		2	10	2	4	2

Reporting confidential information

- 1. Click on the "Data Entry" tab.
- 2. Select a category which have direct subcategories.
- 3. In one of the subcategory, enter the notation key 'C' (confidential) for emissions.
- 4. In this case, the aggregation formula in the parent category becomes editable and can be overwritten.
- 5. Enter the aggregated value in the parent node overwriting the formula.

Exercise: Manual data entry (directly in the tool)

Exercise 3a:

- Go to "1.A.1.b. Petroleum refining > Liquid fuels"
- Fill fuel consumption for several years
- Fill calorific value (choose from the list) and apply subsequent years
- Fill "NO" for CH_4 emissions in the first reporting year.
- Fill numeric values for CO_2 and N_2O

Exercise 3b:

- Go to "1.A.1.b. Petroleum refining > Solid fuels"
- Do similar things for this node as in exercise 3a.
- Go to "1.A.1.b. Petroleum refining" and check the aggregation



Scan the QR code for exercise guide



This method allows downloading data entry grids in Excel format and work offline. It assists users to either check data entered in the software, or to enter/edit data and re-import it into the application. Export of data entry grids can be done for a sub-category, sector, or for the entire inventory.

Exporting excel data entry grids

- 1. Click on category that you want to export.
- 2. Click on "Export" and then on "Current grid as .xlsx" to export the single selected grid or "Current sector/subsector as .xlsx" to export the selected category and all sub-categories below the selected category.
- 3. The file will be exported to your local computer.
- 4. You can also export all data entry grids in excel. Click "Options" then "Export all data entry grids as .xlsx".

Navigation tree	E Options	1.A.1.	b. Petroleum refining				El Navigation tree	Options	1.A.1.	b. Petroleum refinir
ectors/Totals	^	0	Expand all			Show/hide years Export	Sectors/Totals	Ø Edit na	vigation tree	
r 1. Energy		4	Description	Unit	1990	Current grid as .xtsx	~ 1. Energy		completeness	s check
1.A. Fuel combustion activities (sectoral approact	0	01	V Fuel consumption	TJ I	123,456.00	Current grid and its sub-grids as also	 1.A. Fuel combustion activities (sectoral approach) 		ranslation	stion
VIA1 Energy industries		02	Liquid fuels	τ ι	123,456.00		~ 1.A.1. Energy industries	Import	.xlsx file	
> 1.A.1.a. Public electricity and heat production	n +	03	- Solid fuels	τJ			> 1.A.1.a. Public electricity and heat product	Export	all data entry	grids as .xlsx
1.A.1.b. Petroleum refining		04	Gaseous fuels	τJ			1.A.1.b. Petroleum refining	Export	all data entry	grids as json _{els}
F Liquid fuels		05	Other fossil fuelu	τj			+ Liquid fuels		05	Other fossil fuels
- Solid fuels		06	Peat	τa			- Solid fuels		06	Peat
- Gaseous fuels		07	L Biomass	TJ					07	L Biomass
 Other fossill fuels 		80	🗸 Calorific value		NCV		j- Gaseous fuels - Other fossil fuels		08	 Calorific value



Excel data input – Entering data in Excel table(s)

The color scheme of the excel data entry grid follows the same color scheme as in the web interface. The excel file should not be modified to add/delete rows or columns or to enter data in the cells other than the specified cells.

Entering data in Excel data entry grids

- 1. Open the Excel data entry grid file exported from the GHG Inventory reporting tool.
- 2. Enter the data in the white cells for activity data and emissions.
- 3. The implied emission factor (green cells) is not calculated in the Excel file, but it will be calculated upon importing it into the GHG Inventory reporting tool.
- 4. Save the Excel file after entering the data for importing to the GHG Inventory reporting tool.

4	A	В	C	D	Ē	F	G	H	1	3	к
L	TEST			XYZ-CRT-2024		Exported on: 20		the state of the s			-
2	Sector	s/Totals > 1. Energy > 1.A. Fue	l combustion ac	tivities (secto	oral approact	h) > 1.A.1. Energ	y industries >	1.A.1.b. Petro	leum refinin	g > Liquid fue	Is
1	ID	Description	Unit	1990	1991	1992	1993	1994	1995	1996	1997
5	01	Fuel consumption	TJ	123,456.00	123789.00						
6	02	Calorific value		NCV	NCV						
7	63	Method									
8	04	CO ₂		D							
9	05	CH4		T1,T2							
0	06	N ₂ O		T2							
11	07	Emission factor information	6								
12	08	CO;		D							
13	09	CH4		C5							
4	10	N ₂ O		OTH							
15	11	Emissions									
16	12	CO2	30	4,321.00	5432.00						
17	13	CH ₄	lict.	65.40	68.00						
18	14	NzO	kt	8.70	23.00						
19	15	Amount captured									
20	16	COz	id.	NO	-2.50	NO	NO	NO	NO	NO	NO
11	17	Implied emission factor									
2	18	CO2	t/TJ	35.00	NO	NO	NO	NO	NO	NO	NO
23	19	CH4	kg/TJ	529.74							
24	20	N ₂ O	kg/TJ	70.47							
15	21	Documentation box		ŀ	lello again!						
6											

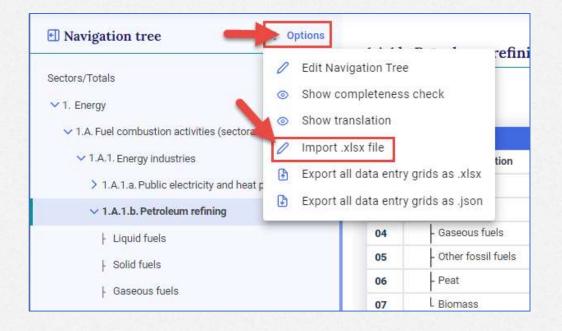


Excel data input – Importing Excel tables into the tool

The Excel data import function will only work with Excel files for data entry grids exported from the GHGI Reporting Tool. The user should first export the file from the software in order to import an Excel file with the data. It is imperative that the format and structure of the Excel file exported are not changed.

Importing excel data entry grids

- 1. Click "Options" and then click "Import .xlsx file".
- 2. Click on the "**Select**" and select the appropriate Excel file to be imported. You can also drag and drop the file in import window.
- 3. Click on "**Import**" button. This will initiate the data import process, which includes automatic input of data, and recalculation of values in cells with formulas.
- 4. You can check the generated log file for the detail of the import.





Exercise: Data entry with Excel export / import

Exercise 4:

- For the category "1.A.1.b. Petroleum refining", export "Current sector/subsector as .xlsx".
- Open the exported Excel file (from your download folder)
- Add some numerical values/notation keys in the exported Excel file.
- Add invalid notation key 'PK' for CH₄ in the exported Excel file.
- Save the exported Excel file
- Import the Excel file to the GHGI reporting tool
- Check that the data that you have entered in the Excel are imported into the tool.



Scan the QR code for exercise guide





Version settings for inventory

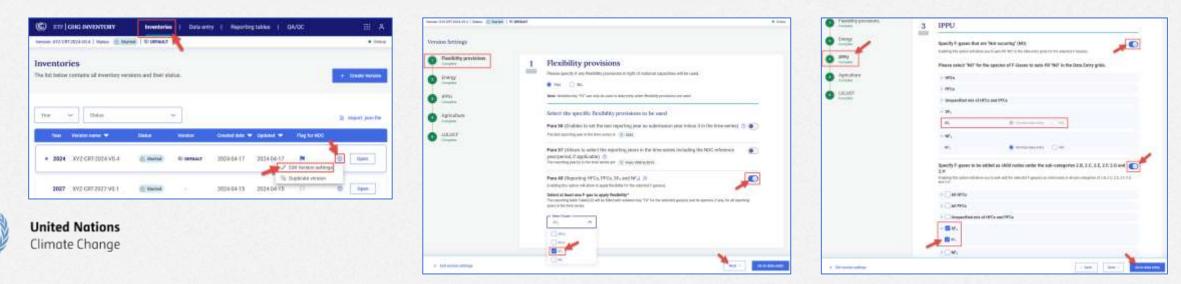
Settings		Explanation
Flexibility provisions	Application of flexibility provision	Option to apply flexibility for those developing country Parties that need it in the light of their capacities. The notation key 'FX' can be used in data entry only when flexibility provisions are used.
	Para 58 (Last year in time series)	Set the last reporting year as the submission year minus 3 in the annual time series.
	Para 57 (Annual time series)	Select the reporting years in the annual time series, including the NDC reference year/period, if applicable.
	Para 48 (Reporting F-gases)	Select F-gas (HFCs, PFCs, SF6 and NF3) for reporting.
Energy	Specify calorific value	Auto-fill the selected calorific values for all fuels in sub-categories of 1.A.
	Fuel(s) Not Occurring	Auto-fill the notation key 'NO' in the data entry grids for the selected fuel(s) in all sub-categories of 1.A.
IPPU	F-Gas(es) Not Occurring	Auto-fill the notation key 'NO' in the data entry grids for the selected species of F-Gas(es).
	Bulk addition of F-Gases species	Bulk add the selected F-gas(es) as child nodes in all sub-categories of 2.B, 2.C, 2.E, 2.F, 2.G and 2.H.
Agriculture	Cattle categorization	Select the options (Option A or Option B) for cattle categorization
LULUCF	Approach for HWP	Specify the approach (Approach A, Approach B and Approach C) for the harvested wood products reporting
	Additional years for HWP activity data	Select additional year(s) for reporting HWP activity data
	Reporting information in Table4(II)	Select the option to report the information in the aggregated or disaggregated way



Editing version setting

You can go back to the edit version setting in your inventory to change the parameters you want to report or add/edit flexibility provisions. This will only affect the version that you are editing.

- 1. Go to the Inventories tab,
- 2. Identify the inventory for which you want to edit the version setting and click on the gear icon.
- 3. Navigate to the section for which you want to edit the version setting
- 4. Edit the settings you want to change.
- 5. Click on "Next" for additional settings or click "Go to data entry"



Exercise: Editing version setting

Exercise 5:

- Go to the Inventories tab and identify the version you are working.
- Go to the edit version setting of that inventory.
- Select the toggle ON for flexibility provision on Para 48 (Reporting HFCs, PFCs, SF6, and NF3).
- Select SF6 to apply flexibility and Click Next to go to the IPPU version setting.
- Select the toggle ON to specify SF6 to be added as child nodes.
- Click on Go to data entry grids
- Go to 2.G.1 and check if SF6 has been added as child nodes and is populated with 'FX'



Scan the QR code for exercise guide





Comments, NK explanation, Documentation box, Footnotes

Туре		Definition
Cell comments	Official comment	Official comment at the cell level of data entry. This will be reflected in the respective reporting tables of the official GHG inventory submission.
	Party comment	A comment entered by a user that they would like to share with the other users within their Party. This will NOT be reflected in the official submission.
	User comment	A comment entered by a user is visible only to that user. Users can put reminders for themselves here. This will NOT be reflected in the official submission.
Notation key Explanation	NK category	Navigation tree path for the cell where the notation keys "IE" and "NE" are entered. Auto-populated by the application. This will be reflected in Table9.
	Allocation by Party	Textual information provided by the user explaining the rationale for using the notation key "IE" . This will be reflected in Table9.
	Allocation by IPCC	Textual information provided by the user explaining the rationale for using the notation key "IE" . This will be reflected in Table9.
	NK Explanation	Textual information provided by the user explaining the rationale for using the notation key "IE" or "NE". This will be reflected in Table9.
Documentatio	n Box	The last line in each data entry grid. This type of comment is year-specific and will, therefore, be reflected only in the documentation box section of the reporting table for the year where the comment was entered. Used for providing reference in the NID.
Footnotes		Static text based on the footnotes in the agreed reporting tables. The footnotes appear in the relevant applicable data entry grid.

Working with comments

Users can insert comments (official, party, user) for the white cells in the data entry grids. Only official comments are reflected in the reporting tables.

ACTIVITY DATA AND

OTHER RELATED

INFORMATION

Annual waste dennes

18⁽²⁾ The CH, august enzyon faster (IEF) is calculated as the basis of gross methane (CH₄) emissions as follows IEF

freamed.

(ki din)

(plkg wants)

considered insignificant (details in NIR Annex 5)

Biological Treatment of Solid Waste

ORTENHOUSE GAS SOURCE AND

(Sheet 1 of 1)

10 Managed solid master 11 Other (strate sensity

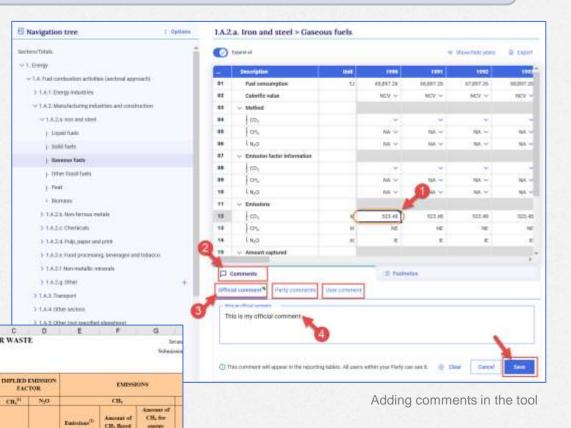
> Automatical Wantes Harman Wantes and Julikowski shudip

Anorrow digestion at bioges facility.

SINK CATEGORIES

- 1. Click on the "Data entry" tab, go to the data entry grids of the category for which you want to provide a comment, and select the white cell for which you want to insert a comment.
- 2. Click on the **Comments** tab at the bottom of the screen.
- 3. Select the type of comment you want to insert.
- 4. Enter the comment and save.
- 5. The comments tab and data entry cells with comments are indicated by a green sign at the top right of cell.

Comments reflected in CR



E6

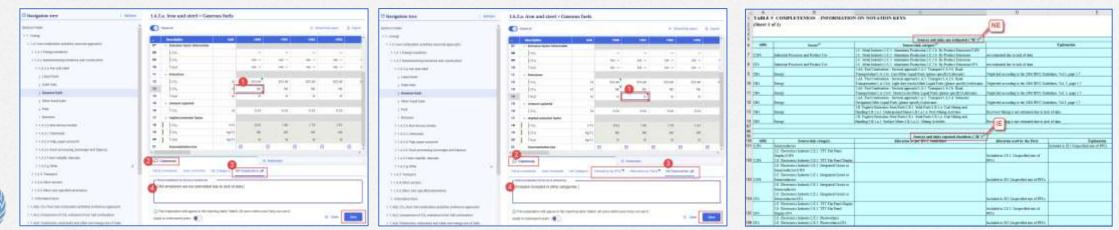


United Nations Climate Change

Working with Notation keys "NE" and "IE"

Users can provide the notation keys explanation for the use of "NE" and "IE," which will be reflected in the reporting table Table9.

- 1. Click on the "Data entry" tab, go to the data entry grids of the category, and enter the notation key 'NE' or 'IE' for the emissions.
- 2. Click on the **Comments** tab at the bottom of the screen.
- 3. Select the type of explanation or the type of comment you want to insert.
- 4. Enter the explanations/comment and save.
- 5. The comments tab and data entry cells with comments are indicated by a green sign at the top right of cell.





Adding NK explanation for "IE" in the tool

Mapping of NK explanation in CRT Table9.

E6



Exercise: Working with comments and NK explanation

Exercise 6:

- Go to the 'Data Entry tab' of your inventory.
- Navigate to the data entry grids for 4. Land use, land-use change and forestry > 4.A. Forest land > 4(III).A. Direct & indirect N₂O emissions from N mineralization/immobilization > 4(III).A.1. Forest land remaining forest land
- Identify the Direct and Indirect emissions for N_2O emissions
- Enter "NE" for Direct emissions (N_2O) and "IE" for Indirect emissions (N_2O)
- Go to the comments tab and enter text in NK's explanation for the use of "NE"
- Enter text in 'Allocation by IPCC' 'Allocation by Party' and 'NKs explanation' for the use of "IE"
- Enter User comment for the selected cell.





Scan the QR code for exercise guide

Viewing/download reporting tables

- 1. Click on the "Reporting tables" tab.
- 2. Select "Years", "Sectors" and "Tables" to view/download the reporting tables.
- 3. Click "Apply filters". The reporting tables based on the selection above will be available for download.

C ETT GHG INVENTO	KY Inventories Oata entry Reporting tables OA/QC	⊞ A
Version XV2-CR12024-VE.84 IRef.	- G Rend	• Ostre
Common reporting Select and download reporting		
Select by 1993, 1995,) ties
	blue more	
D	33 Results showing	To Years
XYZ-CRT-2024-V0.84	() XYZ.CRF.2024-V0.64-1990	mrtiset es alus
2 Downland as you	a xy2 cm 2024 v0.84 1991	ventical as also
2 Download as the	B BYZ CRTOZYA WILEA THEE	writed as also
	Ik AVX-CRE20204-V0.64 1998	writed as also

and in Judge									
REFNHOUSE GAS SOURCE AND SINK CATEGORES	AGGREGATE ACTIVIT	TDATA	Description in a second	MANISON FACTO	RS-COLO	2520011 JUN	DUISSIONS	and a fear	AMOUNT COPTURED
	Convergeton	SCYGCY D	0.10	CE.	×.0	169;	(2), (1)	75,0	£9;
A. Part conference	429815	OCT .				49263.1499	22,7942	110	-30
Lagati fuela	289135	OCY	#7,53923842	36.26983931	1 101411441	19522 2495	15.4998	1.60	MASEN
Re6d facts	340630	901	88.737255999	0.99413965	1.409402388	39/145,61	8.30802	631	-3
Gaussia fasta	NASENO	UC1	MAJERNO	NAMENO	NADEDIO	NAMENO	NANENO	NA.SE.NO	MANEN
Other found tasls"	NANENO	601	NASENO	NANESO	NAMENO	NASEBO	NANENO	HARENO	HARES
Pre ^{rie}	NA.NE,NO	OCY	NAJVENO	NAMENO	SIANE NO	MASKING	SANE390	NAMENO	NANES
Distant ²⁰	KAHE.NO	OCY	MAJVENO	NA38330	NAMESO	NANENO	MANKNO	NAJE NO	NANEN
A.J. Tanegr industries	313270	0.CY				12210-044	6.42800	8.51	
Liquit fiels	40000	OCY	49,39423	and the second s	24	2775,794	0.12	8.024	1
Scilled Radia	3134.0	603	857285118	8.985158571	1408108	29/14/3.82	8.21802	0.901485	.3
Oassessa faeta "	38	GUY	242	30	· ME	102	300	712	- <u>0</u>
Other front firefs"	30	OCY	20	30	312	102	300	30	1 11
Peer	30	GET	313	30	NE	102	302	312	. ä
Biomann -	NE.	SCV .	.922	NT.	112	NE	100	NE.	1 1
A.L.a. Public electroity and best production "	31203	1007				20708-01	8.00882	0.007181	
Laguid field	100	007		1	0.0	21.1	3.0008	8.00001	0 3
Solid Dela	312470	OCV	86.7898118	8.883739037	1.02107138	26140,81	8.30502	0.307485	
Gaussia faits	74	1001	int .	32	152	72	12	7/8	1 3
Other Social Tanla"	58	OCT	312	78	152	102	38	210	
Dist. ²⁰	78	003	20	36	315	30	38	11	1 3
Domas "		OCV	98	- 58	192	211	NE	18	
A1h Persinenteting	19730	601				2732.694	3 1151	0.02382	9
Lightfield	19700	009	18.59790001	1	0.6	2752.#94	0.034	0.02342	
Bolied Gardy	NE	001	393	(5E	KE	NE	NE .	ΤE	3
Owners hads **	NE	007	96	- 194E	IN.	36	YE	NE	1
Other basis hals."	38	001	NE	38	168	Xa	16	施	.)
Paul (*)	28	907	NE	16	NE	100	- 360	NE	
Bonass **	16	OC1	10	54	NI.	NE	345	2度	
A.L.c. Manufacture of which they and other energy to Access	14	GCT				147	10	14	

E7



Exercise: Downloading common reporting tables (CRT)

Exercise 7:

- Select a few years from the years dropdown (e.g., 1990 and 1995)
- Select the "Energy" sector or Select "Tables"
- Click "Apply filters"
- You will see the list of reporting tables for each year
- Download individual Excel files from the list or download them as zip file
- Open the Excel file
- Check if the data you entered in the reporting tool is reflected in the reporting tables



Scan the QR code for exercise guide



JSON data input – Export/ Import JSON file

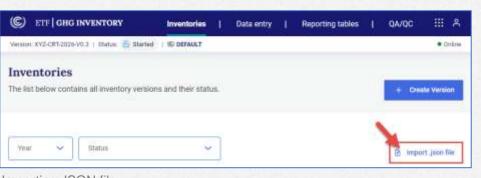
The JSON is the interoperability format used in the GHG Inventory Reporting Tool. It is used for integration with other UNFCCC systems as well as with national systems that follow the JSON schema provided to Parties.

Exporting JSON file

- 1. In the "Data Entry" tab, click "Options" and then click "Export all data entry grids .json".
- 2. The file will be exported to your local computer.
- 3. You can then modify data in the JSON file, or you can transfer the data into JSON file from your national system.

Importing JSON file

- 1. In the "Inventories" tab, click "Import .json file"
- 2. Click on the "Select" and select the appropriate JSON file to be imported. You can also drag and drop the file in import window.
- 3. Click on "**Import**" button. This will initiate the data import process.
- 4. You can check the generated log file for the detail of the import.



Options

Ø Edit Navigation Tree

Show translation

Import xlsx file

Show completeness check

Export all data entry grids as ixlsx

Export all data entry grids as .jsor

64

05

reti

Gaseous fuels

Other fossil fuels



Navigation tree

1.A Fuel combustion activities (sectoral

1.A.1.a. Public electricity and h

LA.1.b. Petroleum refining

1.A.1. Energy industries

| Liquid fuels

| Solid fuels

Exporting JSON file

Sectors/Totals

Energy





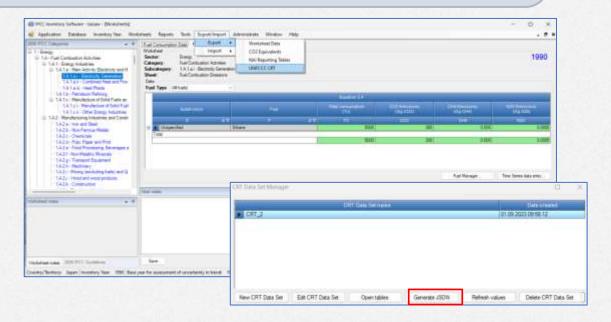
Interoperability with IPCC Software (1/2)

The interoperability with the IPCC Software allows the transfer of the data from the IPCC software to the GHG Inventory Reporting Tool. After estimating the national GHG inventory Parties can export the JSON data exchange file from IPCC software and import it to GHG inventory reporting tool. Please note the following for the interoperability:

- Generation and Export of JSON file is available in the IPCC software version 2.871 or later.
- □ In the test version, JSON import can be done at the sector level only.
- □ In the test version, JSON file generation has been implemented for all sectors except for the F-gases.

In the IPCC Software

- After compiling your GHG inventory, Click "Export/Import" > "Export" > "UNFCCC CRT"
- 2. Click "Generate JSON" and a JSON file is generated.
- 3. Save the JSON file to your computer and it can now be imported to the GHG Inventory reporting tool.



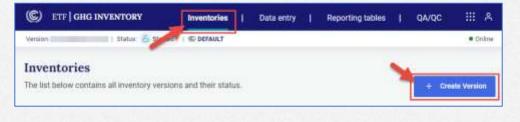




Interoperability with IPCC Software (2/2)

In the GHG Inventory reporting tool

- 1. In the "Inventories" tab, click "+ Create version"
- 2. Click "Select" in the "Upload a file" tile
- 3. Click "Select" and select the JSON file exported from the IPCC software. You can also drag and drop the file in drag and drop area.
- 4. Specify "Submission year", "Default version" and click "Create inventory". The inventory will be created.
- 5. Specify applicable version settings and click "Go to data entry" to start working on your inventory.
- 6. The data imported from the IPCC software will already be populated in the data entry grids.
- 7. You can modify the data, if needed.





I. Selected	the json file to upload.
First select the	Ne you want to upload so that we can analyze if it meets the necessary requirements.
	Drug and drop of Select a json file
0.01.000	
	e submission year year will be reflected in the lowerrory name. You may will the submission year later.
The submittee	
The submittion	
Wear 3. Set as do	year will be reflected in the lowentory name. You may edit the submission year later
Vear Vear 3. Set as de	year will be reflected in the lowentory name. You may edit the submission year later.
The submession Vision 3. Set as de Please select 0 they change the	ryeer will be selected in the lowentory name. You may edit the submission year lobe:



Exercise: Interoperability with IPCC Software

Exercise 8:

- Compiling your GHG inventory in the IPCC Software
- Click "Export/Import" > "Export" > "UNFCCC CRT" in the IPCC Software
- Click "Generate JSON," and a JSON file is generated and save the JSON file to your computer
- Enter the GHG Inventory Reporting Tool
- In the "Inventories" tab, click "+ Create version"
- Click "Select" in the "Upload a file" tile and select the JSON file downloaded to your computer.
- Specify "Submission year" and "Default version" and click "Create inventory".
- Specify applicable version settings and click "Go to data entry" to start working on your inventory.
- Data imported from the IPCC software will already be populated in the data entry grids and you can edit/modify the data if needed.



Scan the QR code for exercise guide





United Nations Climate Change

Thank you for attending!

Let's keep this conversation going.

Join the **Transparency LinkedIn Group** to stay informed with our latest updates, upcoming events and more at: <u>https://www.linkedin.com/groups/13910606/</u>

Let's work **#Together4Transparency** Find out more at:

https://unfccc.int/Transparency

Contact us at: <u>Tools.Support@unfccc.int</u>

