IPCC Inventory Software

Overview

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The IPCC Inventory Software

Complete

All IPCC methods *(all Tiers)*
and all IPCC approaches

All sectors and categories of the National GHG Inventory

AR5

Automatically implements AR5 GWP100 values
(and allows any other user-specific metric to be applied)

Cross-cutting elements
(Uncertainty Analysis
Key Category Analysis)

The IPCC Inventory Software

Easy to Use

Prepare an inventory using IPCC default methods with minimal efforts

All IPCC defaults at your fingertips

Avoids methodological and calculation errors

Data Managers facilitate data entry

(Fuels, Solid Waste, F-gases, Livestock, Land Representation, Land Use)

Have NGHGI estimates ready for Paris Agreement reporting

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The IPCC Inventory Software

Pivotal for National GHG Inventory (NGHGI) Preparation

Adaptable to national circumstances

- Allows subnational level of reporting
- Use multiple tiers across inventory, even within a category
- Apply your own country-specific values wherever available

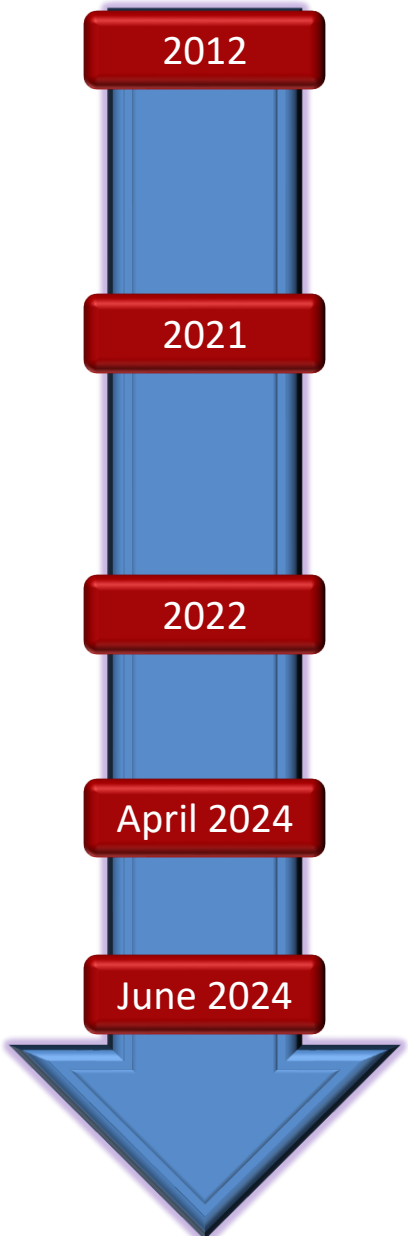
Organizing framework for data collection among national entities

Multiple experts in your country can work on different categories/ sectors simultaneously

Establishes a single archive, in-country, to help you build for the future

Confidence that your inventory is consistent with the *2006 IPCC Guidelines* & UNFCCC requirements

IPCC Inventory Software : from 2012 until today



- ✓ First released in 2012. Initially, designed to be limited to implementing Tier 1 methods of the *2006 IPCC Guidelines*
- ✓ UNFCCC COP26/CMA.3 (Glasgow, 2021), Parties formally recognize value of the IPCC Inventory Software as a tool to help countries report under the Paris Agreement
- ✓ By mid-2022 the *Software* implemented in the **AFOLU & ENERGY** sectors all IPCC Tiers and Approaches in the *2006 IPCC Guidelines* and its *Wetlands Supplement*
- ✓ The latest version implements **ALL** IPCC Tiers and Approaches for **ALL SECTORS**
- ✓ **June 2024**, Interoperability between the *Software* and the UNFCCC ETF Reporting Tool to be working for the entire NGHGI

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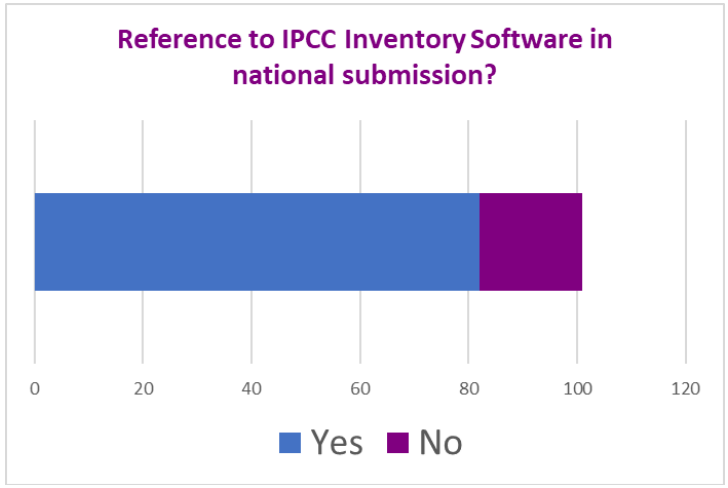
Who is using the IPCC Inventory Software?



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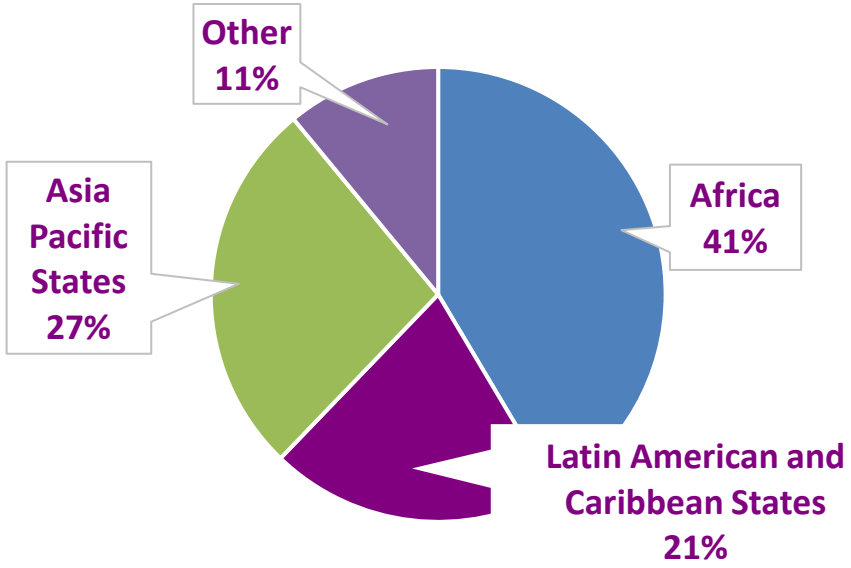
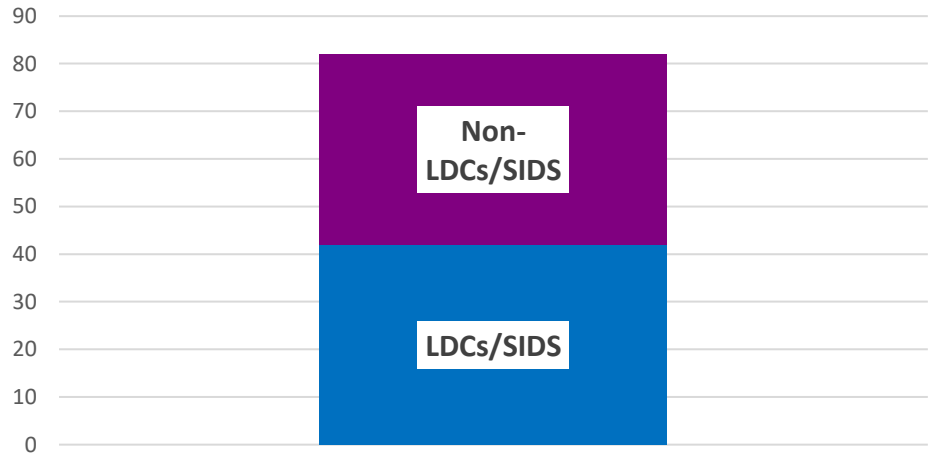
82 Parties

Use of IPCC Inventory Software, by region



LDCs and SIDS?



All information as of 11 April 2024

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What are Countries Saying?

✓ The extent to which the *Software* is used, varies, one or more sectors, some only for QA

- Systematization and processing of data is easier thanks to the *Software*
- The *Software* offers a better opportunity to choose variables closer to our country
- The *Software* is used as the national archiving system
- Allows typing errors to be considerably eliminated, while avoiding methodological errors
- The commenting feature in the *Software* is also used to input remarks in respective fields for continuity and improvement of the inventory in the future

Available resources

- ✓ The 2006 IPCC Guidelines for National GHG Inventories
  - ➢ **The *Software* is a tremendous tool to prepare a GHG inventory**, *although it does not replace knowledge of the 2006 IPCC Guidelines.*
- ✓ The *Software's* Guidebooks
  - ➢ Guide to use the *Software* to estimate anthropogenic GHG emissions and removals from each inventory category by implementing any of the methodological Tiers & Approaches of the *2006 IPCC Guidelines* and its *Wetlands Supplement*, with elements of the ***2019 Refinement***. Already published:
    - Energy Sector
    - Livestock Categories 3.A.
    - Land Representation
    - User Manual
    - UNFCCC Interoperability – CRT Export Quick Start Guide
  - ➢ Other sector-based Guidebooks are under development.
- ✓ **IPCC TFI TSU Support** @ ipcc-software@iges.or.jp

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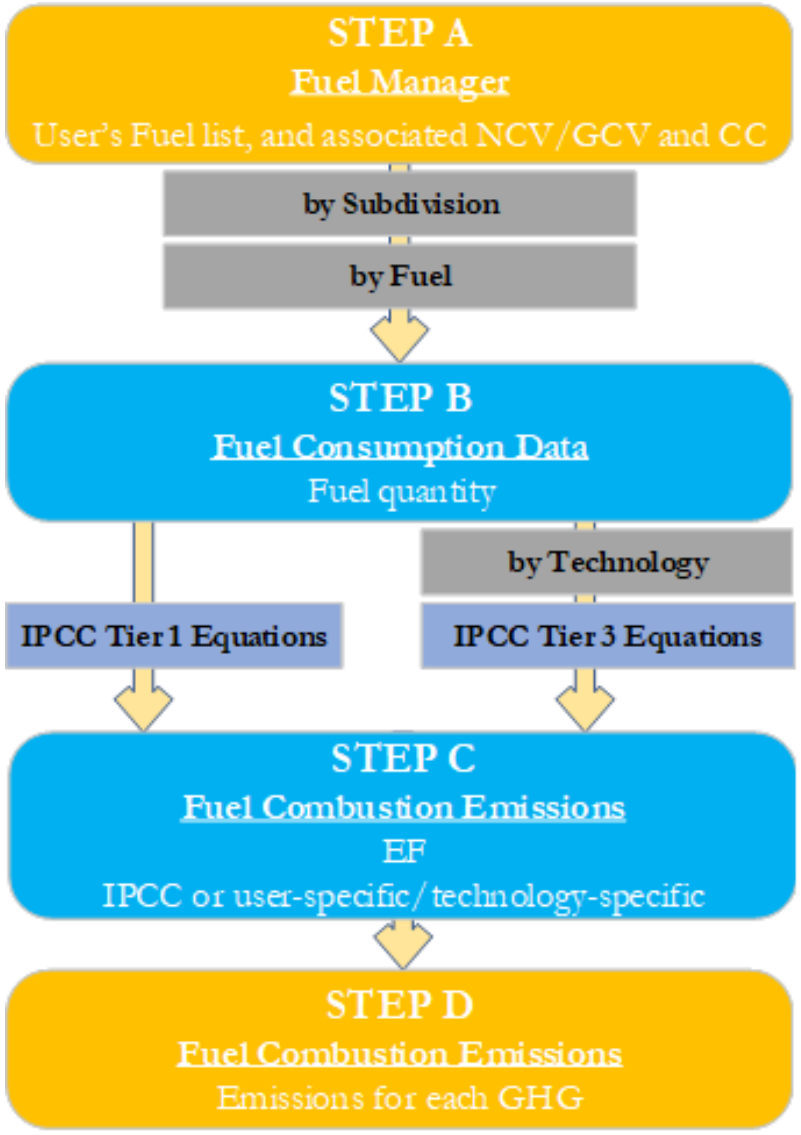
Guidebook - Structure



For each category, the Guidebook includes, *inter alia,* the following information:

- ✓ The relevant equations from the *2006 IPCC Guidelines*
- ✓ A description of the relevant worksheets. For category 1.A.1.a.i this includes **Fuel Manager, Fuel Consumption Data** and **Fuel Consumption Emissions**
- ✓ A **User's Work Flowchart**
  - **Step A: Fuel Manager**
  - **Step B: Fuel Consumption Data**
  - **Step C: Fuel Combustion Emissions - EFs**
  - **Step D: Fuel Combustion Emissions - Results**
- ✓ Step-by-step guidance to input **activity data** and **emission factor** information
- ✓ **Results**

Ongoing Work

- ✓ **Paris Agreement requirements**
  - ➢ Interoperability with ETF reporting tool, to be concluded by **June 2024** (adding IPPU sector F-gases, and Indirect emissions tables)
- ✓ **Extending capacity for Uncertainty Analysis** and **Key Category Analysis**
- ✓ **Facilitating export/import of data (Time series)**
- ✓ **Completing publication of Guidebooks**
- ✓ **Step-by-step instructions**, *in a ppt/video format,* **to implement IPCC default methods**

Relationship *Software* & Paris Agreement Reporting

- ✓ Beginning 31 December 2024, countries submit a **biennial transparency report (BTR)** consisting of a narrative document and reporting tables/ formats.

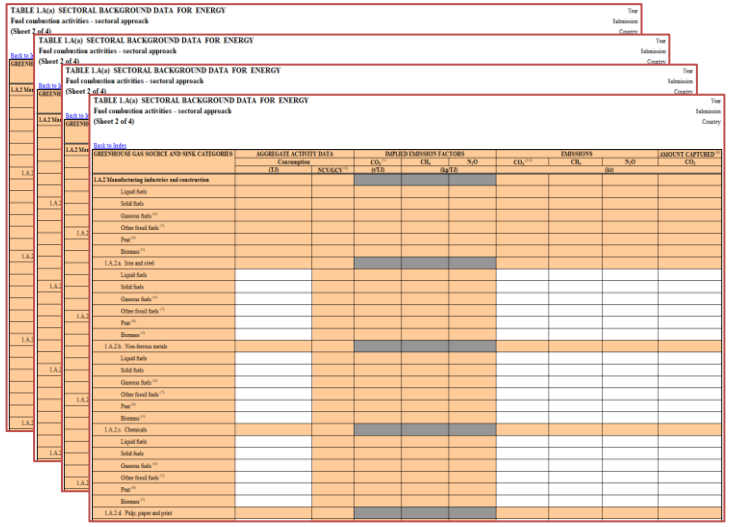
- ✓ Reporting must follow the **Modalities, Procedures and Guidelines (MPGs)** (decision 18/CMA.1)

- ✓ **Decision 5/CMA.3** mandates the UNFCCC to develop reporting tools for the electronic reporting of the tables and formats, specifically:
  - ✓ Common reporting tables (CRT) for GHG inventory (Annex I);
  - ✓ Common tabular formats (CTF) for tracking progress made in implementing/achieving NDCs (Annex 2);
  - ✓ CTF for financial, technology development and transfer and capacity-building support (Annex 3)

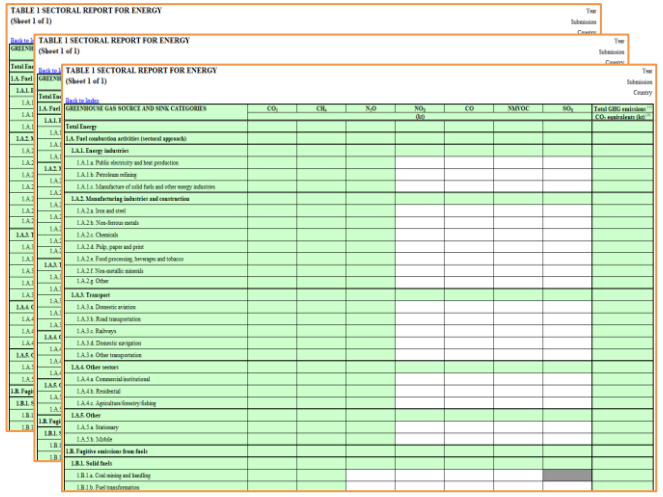
- ✓ Decision 5/CMA.3 requests the UNFCCC secretariat **to facilitate interoperability** between the reporting tools and the IPCC inventory software and invites the IPCC to participate in this effort.

Introducing Common Reporting Tables (CRT) from Decision 5/CMA.3

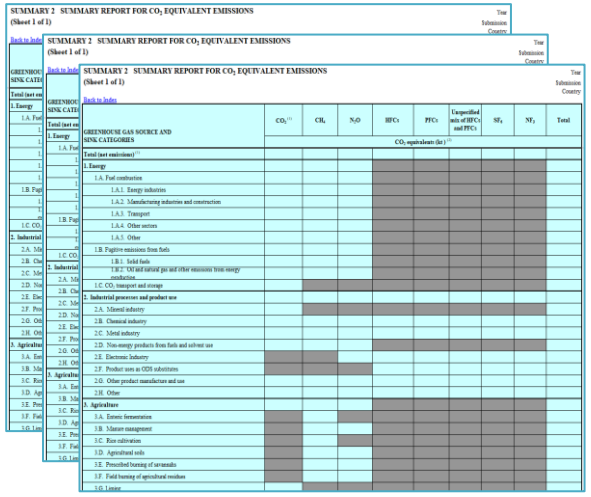
- ✓ The BTR includes a National GHG Inventory
- ✓ The National GHG Inventory includes
  - National inventory document
  - CRT (*60 worksheets for each year*)
- ✓ UNFCCC is preparing the electronic reporting tool to facilitate reporting of the CRT



Sectoral Background Tables



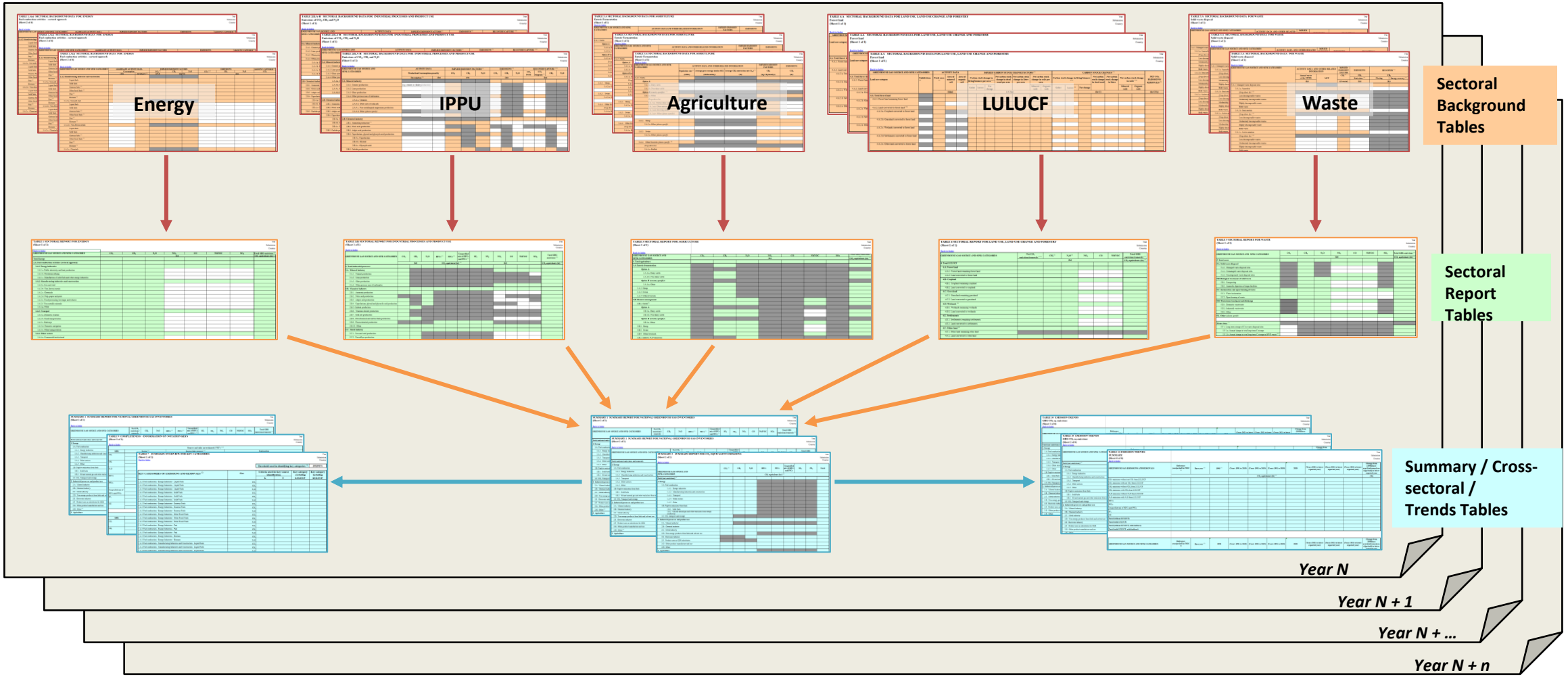
Sectoral Report Tables



Summary / Cross-sectoral / Trends Tables

Source: UNFCCC

Introducing Common Reporting Tables (CRT) from Decision 5/CMA.3



Source: UNFCCC

Use NGHGI from *Software* for Paris Agreement Reporting

UNFCCC ETF Reporting Tool

IPCC Inventory Software

Estimate GHG emissions in the IPCC Inventory Software

- ✓ Estimate GHG emissions consistent with relevant IPCC Guidelines
- ✓ Reduce errors
- ✓ Supports national institutional arrangements

Define /Modify/ Delete CRT Data Set

- ✓ Define CRT data set

Review Visualized CRTs

- ✓ Review results; if necessary, go back to calculation worksheets
- ✓ Finalize notation keys for reporting
- ✓ Add information to complete documentation boxes, CRT Summary 3, CRT 9, and for reporting on flexibilities used *(if applicable)*

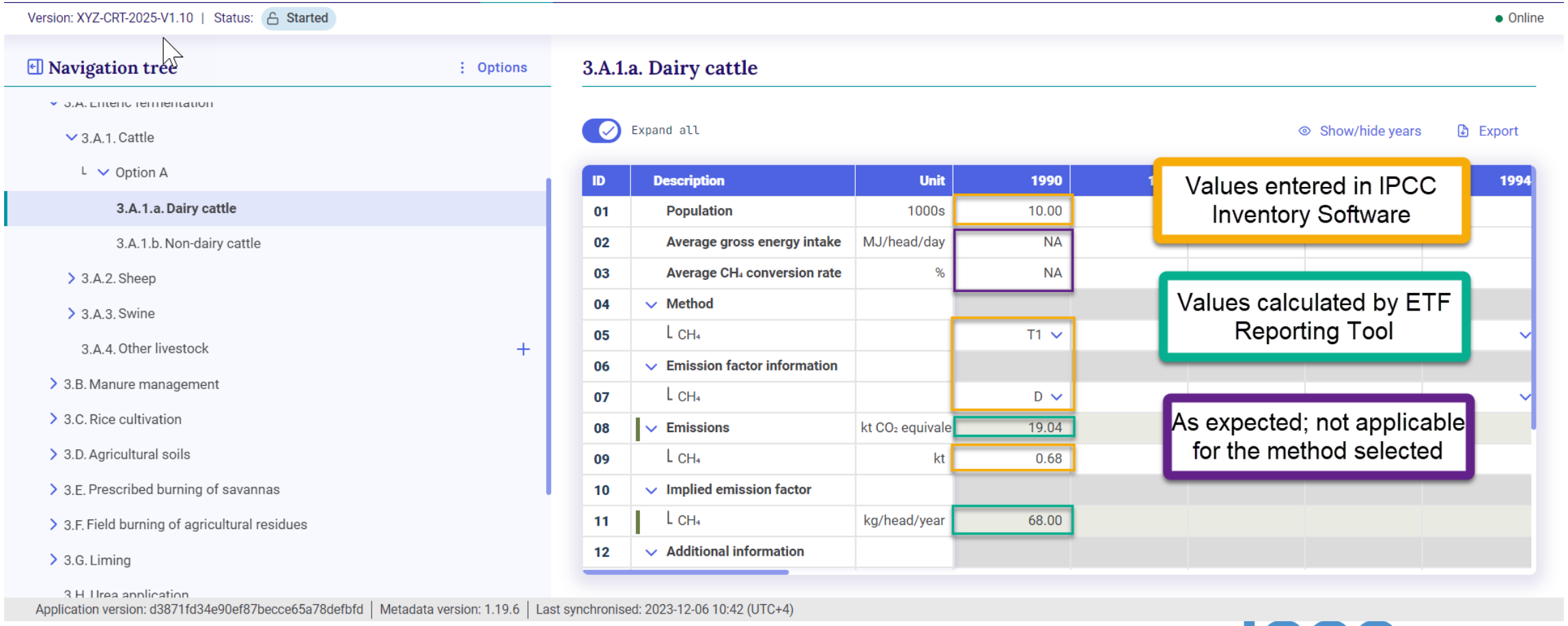
Produce JSON file for upload to the ETF Reporting Tool

Final step in the IPCC Inventory Software: save JSON file to your computer

Upload JSON file into the UNFCCC ETF Reporting Tool

A Glimpse into UNFCCC ETF Reporting Tool

- In ETF Reporting Tool, you have options on how to create your GHG Inventory, one of those options is to "Upload a File". That file can be the JSON file generated in the IPCC Inventory Software.



Note: Images taken in 2023 and subject to change as ETF Reporting Tool is finalized.

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ETF Reporting Tool: Data Appear in Generated Reporting Tables

TABLE 3.A SECTORAL BACKGROUND DATA FOR AGRICULTURE 1990

Enteric Fermentation XYZ-CRT-2025-V1.10

(Sheet 1 of 1) XYZ

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GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS	EMISSIONS
	Population size [1] (1000s)	Average gross energy intake (GE) (MJ/head/day)	Average CH_4 conversion rate (Y_m) [2] (%)	CH_4 (kg CH_4/head/yr)	CH_4 (kt)
3.A.1. Cattle	20			57.5	1.15
Option A:					
3.A.1.a. Dairy cattle	10	NA	NA	68	0.68
3.A.1.b. Non-dairy cattle	10	NA	NA	47	0.47
3.A.2. Sheep	1.1			5	0.0055
3.A.2.a. Other *(please specify)*	1.1			5	0.0055

Note: Images taken in 2023 and subject to change as ETF Reporting Tool is finalized.

Conducted live demonstration of IPCC Inventory Software: preparing inventory estimates and interoperability with the CRT

download the *Software* at @ https://www.ipcc-nggip.iges.or.jp/software/index.html

(32 vs 64 bit versions)

Contact **IPCC TFI TSU** at ipcc-software@iges.or.jp

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