



# Version 2.83 of the IPCC Inventory Software and current development plans

IPCC TFI Side Event  
Sharm el-Sheikh - Climate Change Conference  
UNFCCC COP27  
November 2022

# Outline

- **The Software**
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  - ✓ **Functionalities**
  
- **The Version 2.83**
  - ✓ **Main features**
  - ✓ **Work in progress**
  - ✓ **Supporting tools**
  - ✓ **Downloading and testing**
  
- **TFI TSU support to users**

# The Software

The screenshot displays the IPCC Inventory Software - TSU interface. The top menu bar includes Application, Database, Inventory Year, Worksheets, Reports, Tools, Export/Import, Administrate, Window, and Help. A red box highlights the menu bar with the label "Selecting Functionalities".

On the left, a tree view shows "2006 IPCC Categories" with a red box around it and the label "Selecting categories". The selected path is 1.A - Fuel Combustion Activities > 1.A.1 - Energy Industries > 1.A.1.a - Main Activity Electricity and Heat > 1.A.1.a.i - Electricity Generation.

The "Worksheets" pane shows "Fuel Consumption Data" and "Fuel Combustion Emissions" selected, with a red box and the label "Selecting Worksheets". The "Sector" is Energy, "Category" is Fuel Combustion Activities, "Subcategory" is 1.A.1.a.i - Electricity Generation, and "Sheet" is Fuel Consumption Data.

The main data table, titled "Equation 2.4", shows consumption data for various regions and fuels. The table has columns for Subdivision (S), Fuel (F), Consumption Unit (U), Consumption (C), Conversion Factor (CF), and Total consumption (TC). The formula  $TC = C * CF$  is shown above the table.

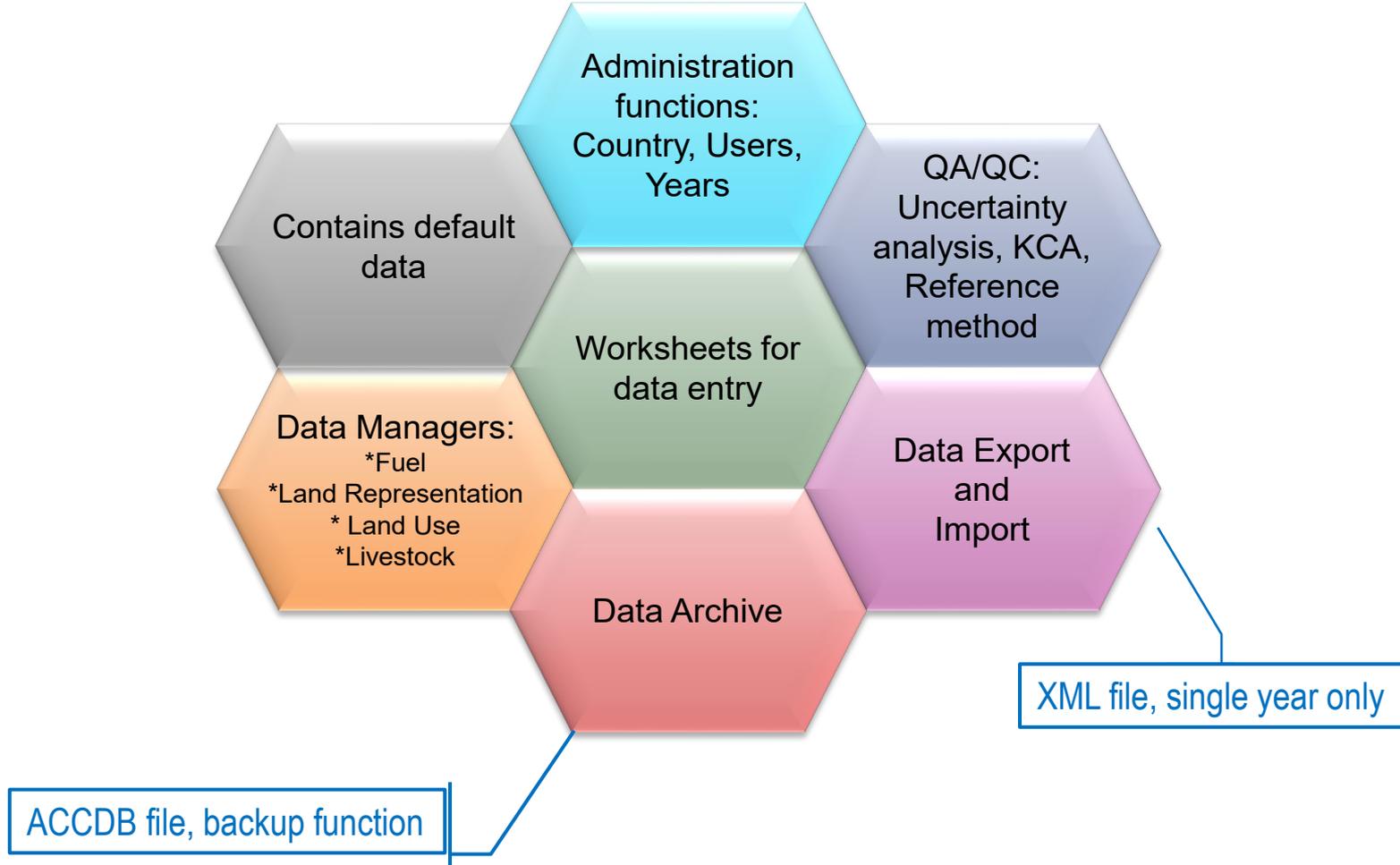
Subdivision	Fuel	Consumption Unit	Consumption (Mass, Volume or Energy Unit)	Conversion Factor (TJ/Unit) (NCV)	Total consumption (TJ)
S	F	U	C	CF	TC = C * CF
Region A	Crude Oil	TJ	500	1	500
Region B	Crude Oil	Gg	50	42.3	2115
Region C	Lignite	Gg	1000	11.9	11900
Region D - Plant X	Oil Shale / Tar Sands	Gg	2000	8.9	17800
Region D - Plant Y	Natural Gas (Dry)	Gg	700	48	33600
Region D - Plant W	Natural Gas + Hydrogen (20%)	Gg	3000	55	165000
Total					230915

At the bottom, a "Time Series" chart shows "CARBON DIOXIDE (CO2) Emissions (Gg CO2 Equivalents)" from 1990 to 2020. The chart shows a significant increase in emissions over the period. The base year for assessment of uncertainty in trend is 1990.

The status bar at the bottom indicates: Country/Territory: Japan | Inventory Year: 1990 | Base year for assessment of uncertainty in trend: 1990 | CO2 Equivalents: SAR GWPs (100 year time horizon) | Database file: (G:\Shared drives\IPCC-TSU\inventory\_software\ipcc2006.accd)

➤ Free to use

# Software Functions



- MSAccess (ACE OLEDB 12) for WindowsOS
- Microsoft .NET Framework 4.6.2

# Version 2.83

## ➤ current **version 2.83** main features

- ✓ implements **all IPCC Tiers and Approaches** to estimate GHG emissions/removals, as provided in the 2006 IPCC Guidelines and its 2013 Wetlands Supplement
- ✓ allows, in each equation, to **input user-specific values for EFs and parameters**
- ✓ allows **subnational level of reporting**
- ✓ can be used for the whole inventory or just individual categories
- ✓ allows different sectors to be developed simultaneously
- ✓ allows different Tier-worksheets to be used altogether within a category

# Ongoing work

## ➤ Paris Agreement requirements

- ✓ AR5 GWP100
- ✓ Indirect CO<sub>2</sub> emissions
- ✓ (memo item) Indirect N<sub>2</sub>O emissions
- ✓ Interoperability with UNFCCC reporting tool for CRTs (5/CMA.3)

## ➤ Other

- ✓ Notation Keys
- ✓ Time series export/import
- ✓ Supporting tools

# Supporting tools

- **Excel-based tool for data upload in the IPCC Inventory Software**
  - ✓ **Harvested Wood Products**
  - ✓ **Land Representation (multiple Regions, all Approaches)**
- **Other**
  - ✓ **User Guidebook for each sector (step-by-step instructions)**
  - ✓ **Land representation Adds-on:**
    - 1. based on wall-to-wall data collection and analysis (maps)**  
*Under development by FAO SEPAL Team*
    - 2. based on sampling data collection and analysis (inventories)**  
*Under development through FAO-COLLECT EARTH customization*

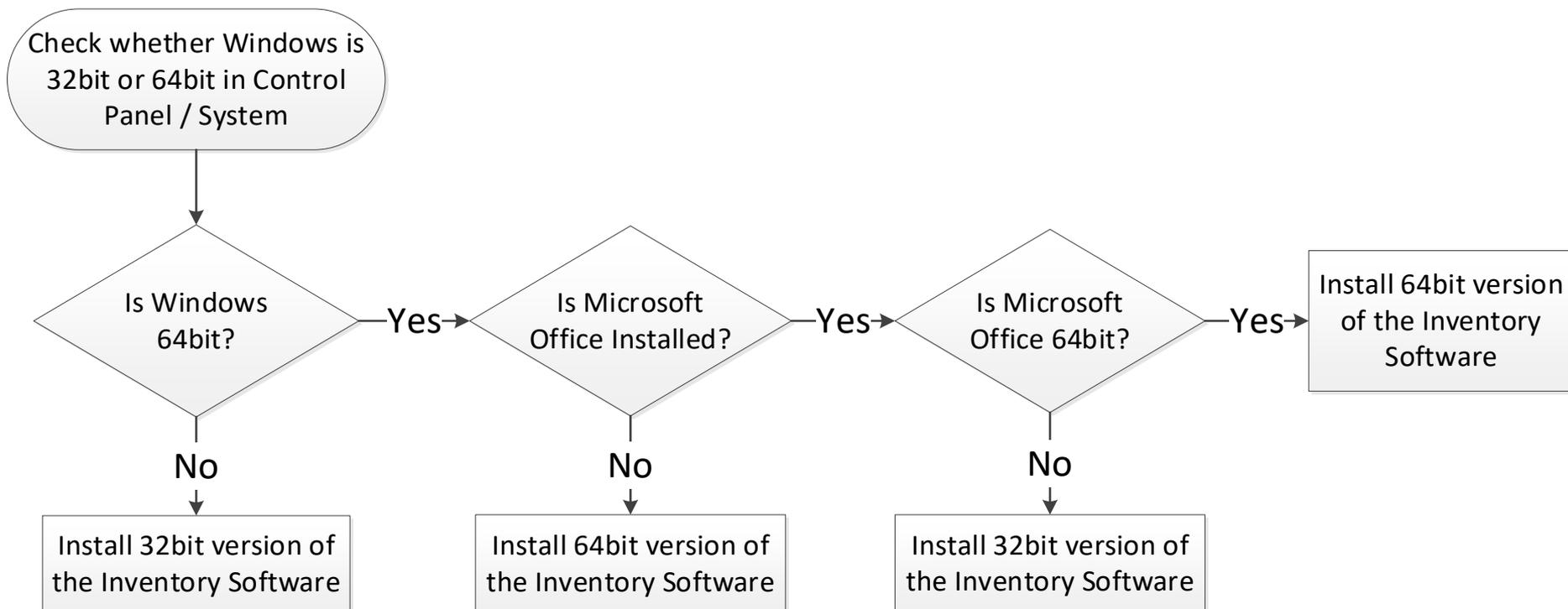
# Future work

- **Uncertainty Analysis, Approach 2**
- **Key Category Analysis, Approach 2**
- **Multiple users at category level**
- **Interconnection with the EFDB**

# Downloading the file of Version 2.83

Version 2.83 of the IPCC Inventory Software comes with 2 alternative installation packages –i.e. 64bit vs 32bit–.

To select the appropriate file users shall follow the below decision tree:



# Download it at <https://www.ipcc-nggip.iges.or.jp/software/index.html>

## Inventory Software

### New Version 2.83 – IPCC Inventory Software

This is the new version 2.83 of the IPCC Inventory Software released at UNFCCC COP27 (Sharm el-Sheikh – Egypt – November 2022).

This version is published to allow users to familiarize with it and to support our testing exercise. Please download it and come back to us at [ipcc-software@iges.or.jp](mailto:ipcc-software@iges.or.jp) with any findings on bugs to be corrected and/or improvements needed.

Please note that version 2.83 comes in 2 different files for installation. Thus, before downloading the file you need check which one you actually need by using [this decision tree](#).

Thank you very much for your support.

[Ver. 2.83 IPCC Inventory Software - 64bit](#)

[Ver. 2.83 IPCC Inventory Software - 32bit](#)

In coming months, according to the software development plan as well as to feedback from testing, new versions will be released until the work on interoperability is completed

Please support us through testing and reporting your findings at [ipcc-software@iges.or.jp](mailto:ipcc-software@iges.or.jp)

# Support

## TFI TSU is supporting the IPCC Inventory Software

- **User Manual**
- **Help Desk - E-mail** [ipcc-software@iges.or.jp](mailto:ipcc-software@iges.or.jp)
- **Pool of voluntary testers**, to support software development and use
- **Cooperation** in the **UNFCCC training workshops** on the use of the IPCC Inventory Software
- **Annual meeting on feedback from software users**, including issues where support is needed or a software improvements is envisaged  
*next year focus on IPPU & Waste sectors and interoperability*

*In the 7<sup>th</sup> IPCC assessment cycle (from July 2023) the plan and support may be subject to changes, depending on consideration by the IPCC and the new Bureau of the Task Force on National Greenhouse Gas Inventories*



# Thank you

<https://www.ipcc-nggip.iges.or.jp/software/index.html>

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