



IPCC Inventory Software

Virtual presentation

IPCC TFI TSU

Background

- ✓ produced, since 2012, by the IPCC Task Force on National Greenhouse Gas Inventories (IPCC TFI) to assist inventory compilers in using the 2006 IPCC Guidelines
- ✓ based on MS-Access for WindowsOS

Background

- ✓ Free to use

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

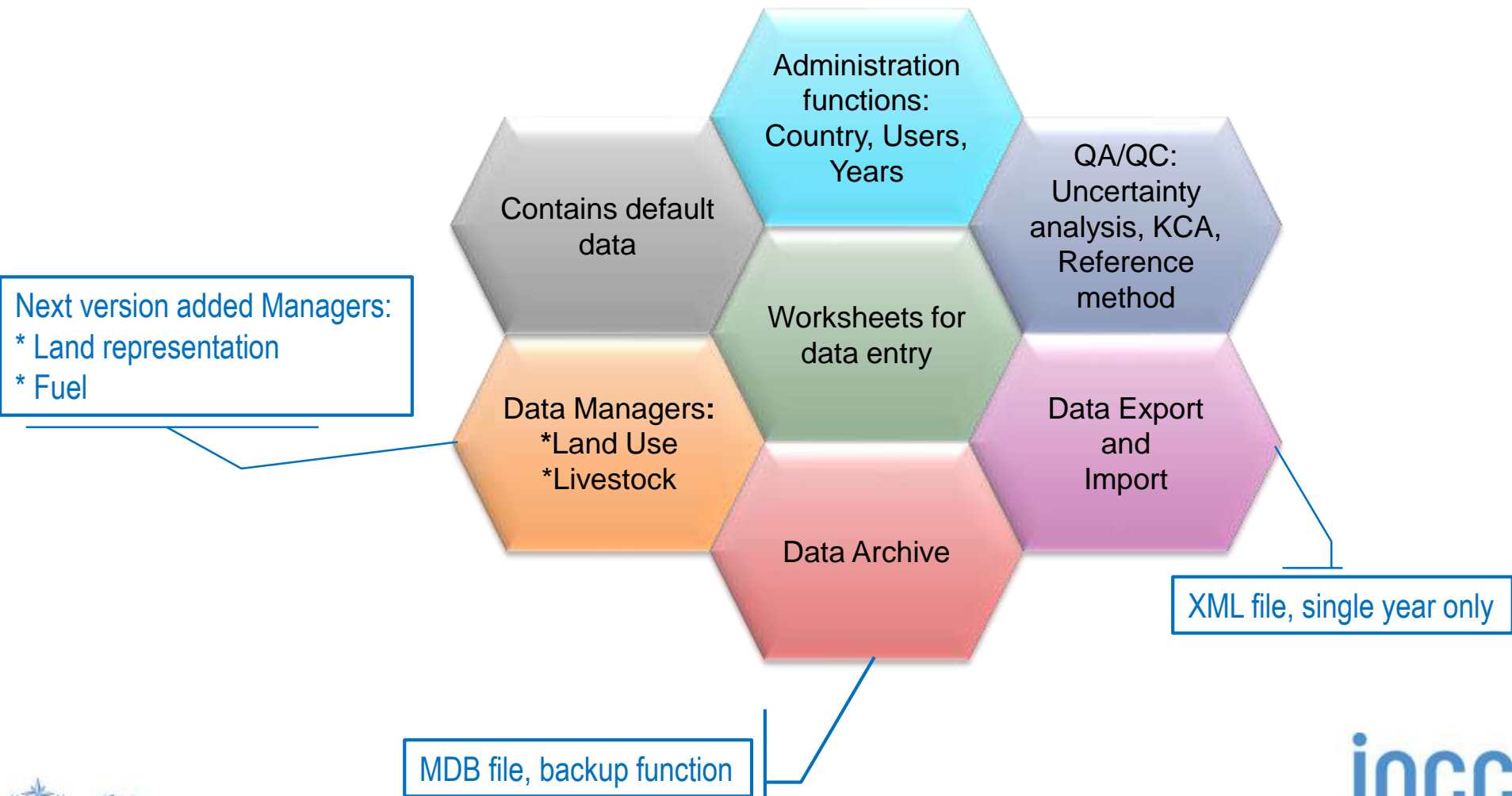
- ✓ Support to users provided by IPCC TFI TSU

- ✓ Plan for updating to full methods/tiers/approaches within the 2006 IPCC Guidelines

Background

- ✓ originally designed to implement Tier 1 Worksheets only **provides default data from the 2006 IPCC Guidelines**
- ✓ current **version 2.691** allows input of **user-specific values** for **EFs** and **parameters (Tier 2)** for **Energy, IPPU, Agriculture, Waste** categories
- ✓ can be **used for the whole inventory or just individual categories**
- ✓ **allows different sectors to be developed simultaneously**
- ✓ **can report outputs in non-Annex I National Communications format**
(reporting tables, consistent with Tables 1 and 2 in Annex to Decision 17/CP.8)

Software Functions



The Software

IPCC Inventory Software - sandro - [Worksheets]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

2006 IPCC Guidelines

- 1 - Energy
- 2 - Industrial Processes and Product Use
- 3 - Agriculture, Forestry, and Other Land Use
- 4 - Waste
- 5 - Other

Time Series

Time Series

Category: 1 - Energy

Gas: CARBON DIOXIDE (CO2)

CARBON DIOXIDE (CO2) Emissions (Gg CO2 Equivalents)

* Base year for assessment of uncertainty in trend: 1990

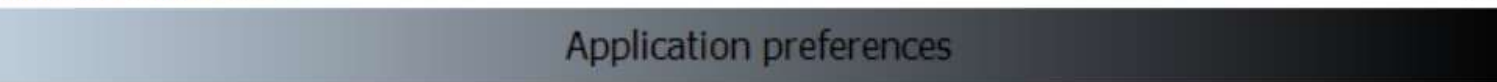
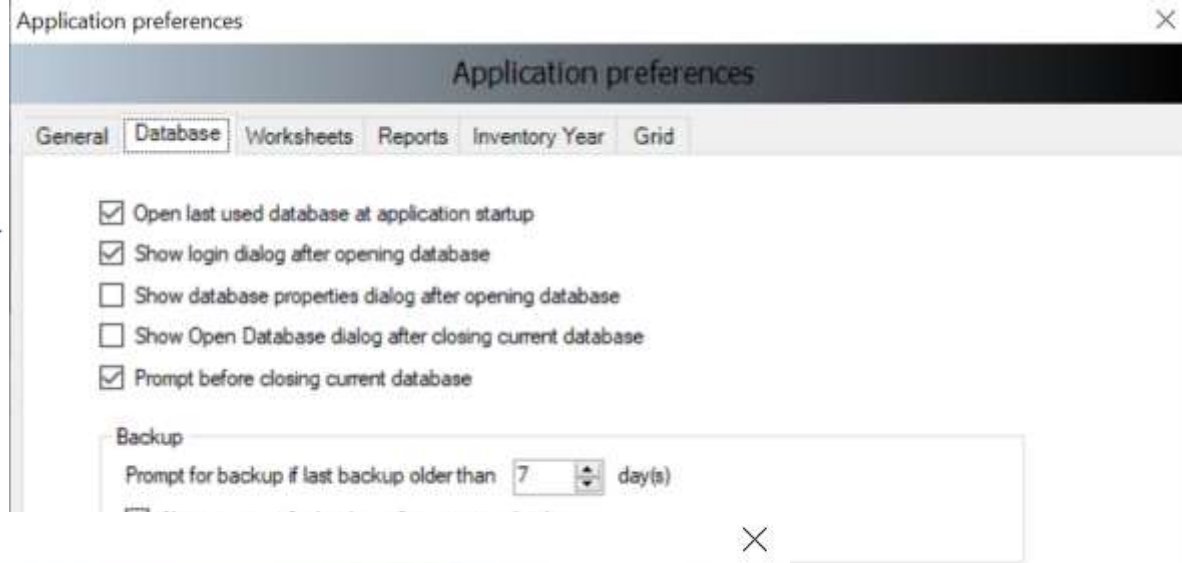
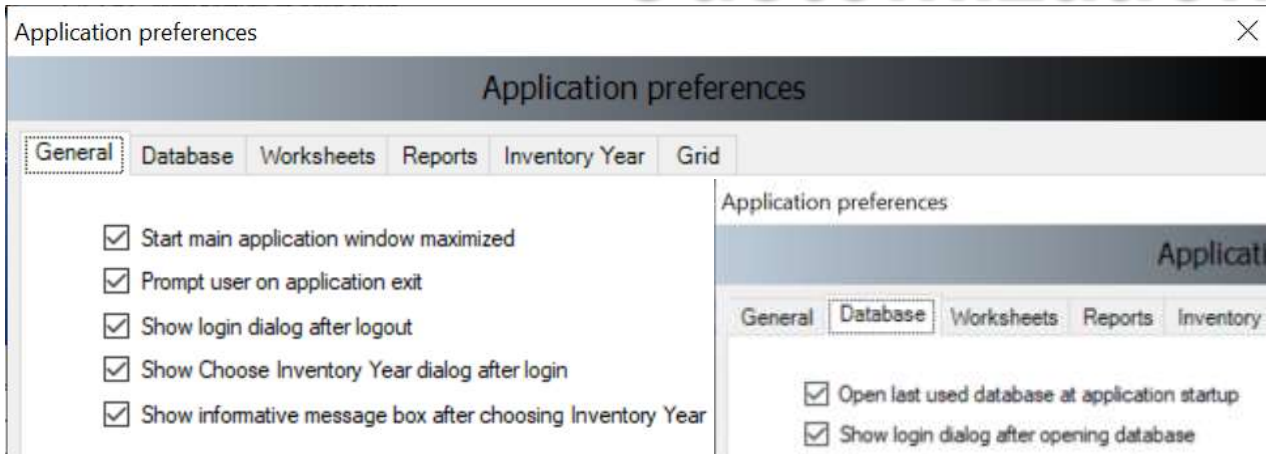
Worksheet remarks

1.A.1.a. Time Series

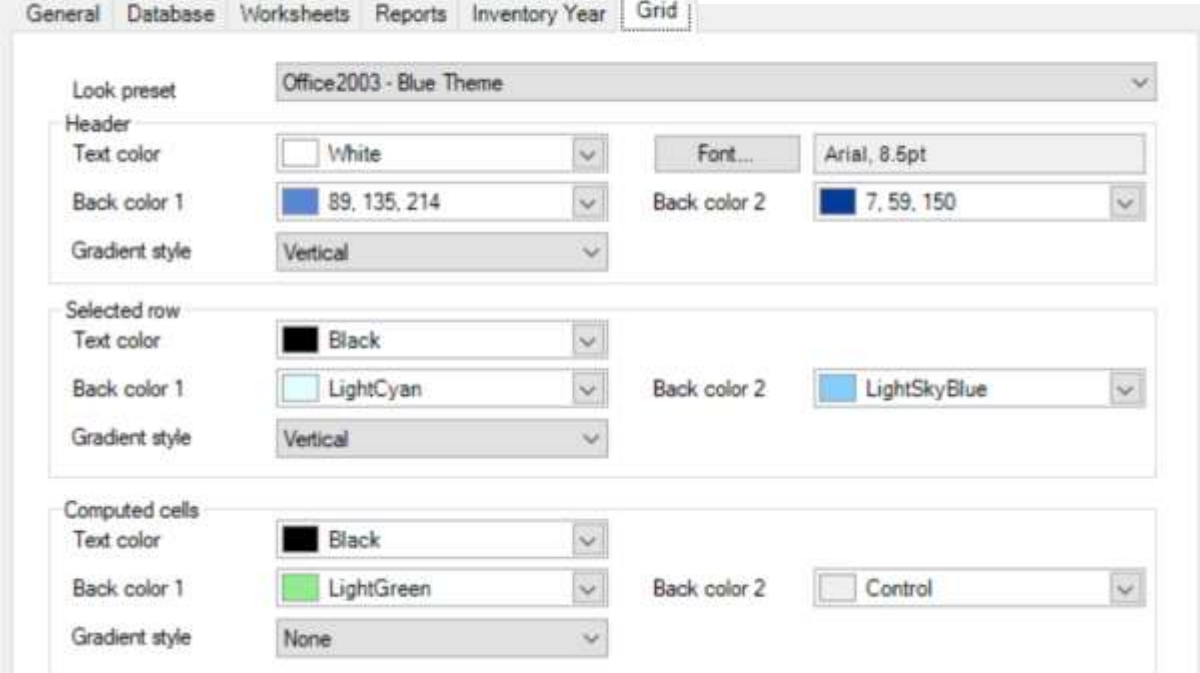
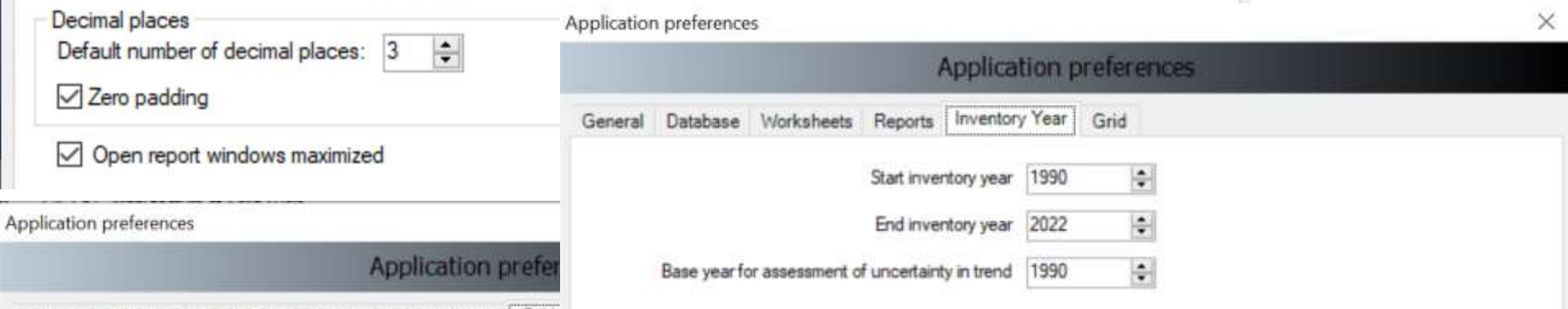
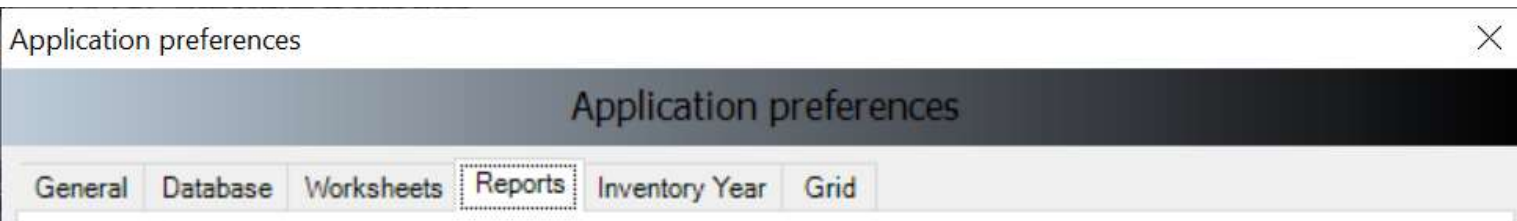
Gas: CARBON DIOXIDE (CO2)

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: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

Customization



Customization



Database properties

Database Inventory Year

- Close database
- Save As...
- Properties...
- Logout

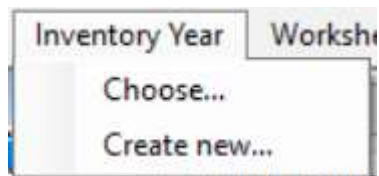
Database properties

Database file	G:\Shared drives\IPCC-TSU\inventory_software\ipcc2006_accdb	
Database version	2.80	
Database size	17698816 bytes	Compact and repair
Date created	01/02/2022 14:12:28	
Date modified	14/04/2022 11:35:03	
Last backup	01/02/2022	
CO2 Equivalentts	SAR GWPs (100 year time horizon)	

Inventory Years	Users
1990 2020	TSU

Close

Database properties



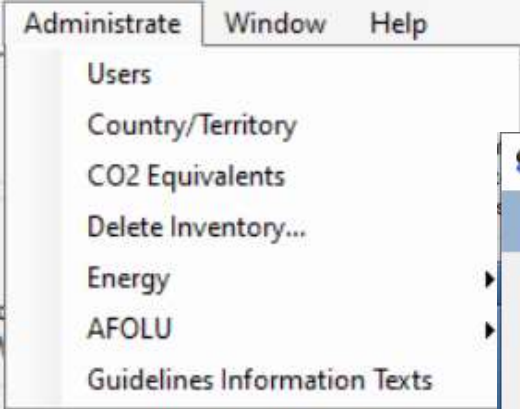
New inventory

Create new Inventory Year

New Inventory Year

Create empty inventory year
 Copy data from inventory year

Administrate



The "User Management" dialog box is titled "TSU" and has a close button (X) in the top right corner. It is divided into two main sections: "List of Users" and "Selected User Details".

List of Users: A tree view showing a hierarchy. "Superusers" is expanded to show "TSU (You)", which is selected and highlighted in blue. Below "Superusers" is a "Users" folder.

Selected User Details: The "Login" field contains "TSU" and the "Superuser" checkbox is checked. Below this is a tree view of "Allowed worksheets" with the following items checked:

- 1 - Energy
 - 1.A - Fuel Combustion Activities
 - 1.B - Fugitive emissions from fuels
 - 1.C - Carbon dioxide Transport and Stor
- 2 - Industrial Processes and Product Use
 - 2.A - Mineral Industry
 - 2.B - Chemical Industry
 - 2.C - Metal Industry
 - 2.D - Non-Energy Products from Fuels a
 - 2.E - Electronics Industry
 - 2.F - Product Uses as Substitutes for Oz
 - 2.G - Other Product Manufacture and Us
 - 2.H - Other
- 3 - Agriculture, Forestry, and Other Land Us
 - 3.A - Livestock
 - 3.B - Land
 - 3.C - Aggregate sources and non-CO2 e
 - 3.D - Other
- 4 - Waste
 - 4.A - Solid Waste Disposal
 - 4.B - Biological Treatment of Solid Wast
 - 4.C - Incineration and Open Burning of
 - 4.D - Wastewater Treatment and Dischar
 - 4.E - Other (please specify)
- 5 - Other
 - 5.A - Indirect N2O emissions from the at
 - 5.B - Other (please specify)

At the bottom right of the dialog box are four buttons: "Save", "Add new", "Delete", and "Set Password". A "Close" button is located at the bottom center of the dialog box.

Tester

List of Users

- [-] Superusers
 - TSU (You)
- [-] Users
 - Tester

Selected User Details

Login Superuser

- Allowed worksheets
 - 1 - Energy
 - 1.A - F
 - 1.B - F
 - 1.C - C
 - 2 - Industri
 - 2.A - M
 - 2.B - C
 - 2.C - M
 - 2.D - N
 - 2.E - E
 - 2.F - P
 - 2.G - Other Product Manufacture and Us
 - 2.H - Other
 - 3 - Agriculture, Forestry, and Other Land Us
 - 3.A - Livestock
 - 3.B - Land
 - 3.C - Aggregate sources and non-CO2 e
 - 3.D - Other
 - 4 - Waste
 - 4.A - Solid Waste Disposal
 - 4.B - Biological Treatment of Solid Wast
 - 4.C - Incineration and Open Burning of
 - 4.D - Wastewater Treatment and Dischar
 - 4.E - Other (please specify)
 - 5 - Other
 - 5.A - Indirect N2O emissions from the at
 - 5.B - Other (please specify)

Set Password

Password

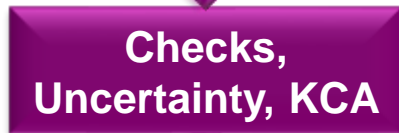
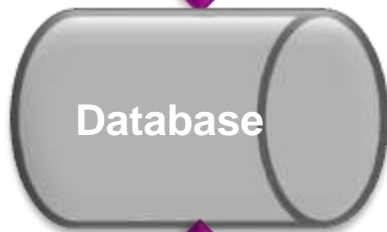
Confirm Password

Password hint

-
-
-
-

Multiple Users

Project manager



Distribute updated DB
(MDB file)



Combine Databases
(XML File)



Sectoral Expert(s)

Compile Sector 1
(Energy)

Compile Sector 2
(IPPU)



Compile Sector 5
(Other)

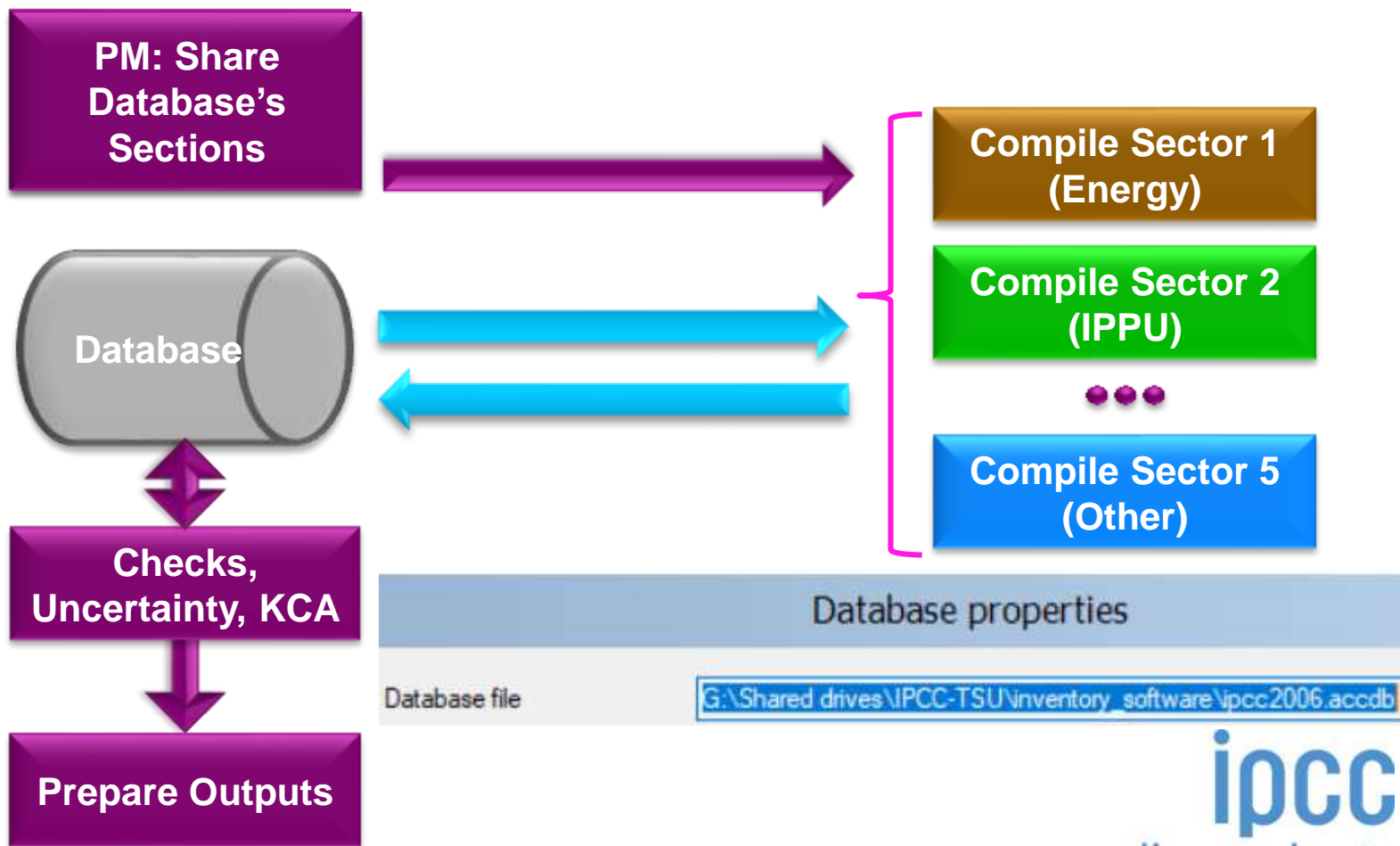
Using XML file aimed to
avoid losing or overwriting
the database unintentionally

Multiple Users

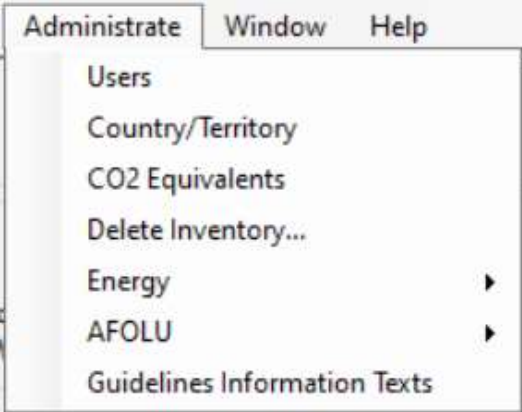
Project manager

Sectoral Expert(s)

Share Database'
sections



Administrate



Choose Country/Territory

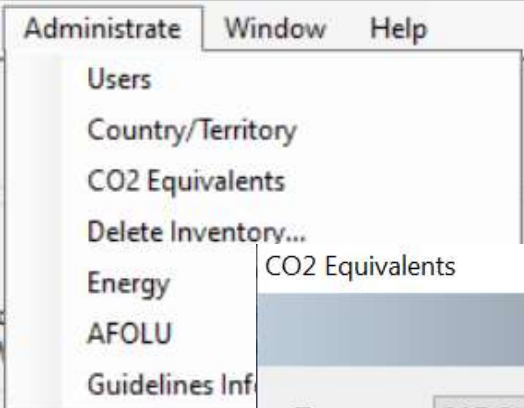
Choose Country/Territory

Region Asia

Country/Territory Japan

OK Cancel

Administrate



CO2 Equivalents

Type: SAR GWPs (100 year time horizon) [v] [Set as default] [Add type...] [Delete type...]

Gas Group	
+ ▶	CO2, CH4 & N2O
+ ▶	HFCs
+ ▶	PFCs
+ ▶	SF6
+ ▶	Other GHGs

OK

Planned to add AR5 GWP₁₀₀

Administrate AFOLU (Land Use Manager)

Land Use Manager

Land use structure

- Forest Land
 - Managed Forest Land
 - natural
 - oak
 - pine
 - Unmanaged Forest La
- Cropland
- Grassland
- Wetlands
- Settlements
- Other Land

Land use subdivision - common parameters

Land use subdivision name: natural

Soil Type: High Activity Clay Mineral

Soil Status: Drained

Country/Territory: Japan

Continent: Asia

Climate Region: Tropical Wet

It is not possible to change some of the parameters since subdivision is already being used in Land Representation Manager

Land use subdivision - Managed Forest Land specific parameters

Ecological zone: Tropical rain forest

Species: Other Broadleaf

Natural Forest Plantation: Abandoned managed land:

Land mass: Insular

Age class (yr): User-defined range

Above-ground biomass stock (t d.m. / ha): 200.000

Above-ground biomass growth (G) (t d.m. / ha / yr): 0.500

Ratio of below-ground biomass to above-ground biomass (R) (t root d.m. / t shoot d.m.): 0.370

Biomass carbon fraction (t C / t d.m.): 0.470

Growing stock level (V) (m³ / ha): 121-200

Average net annual increment of growing stock (lv) (m³ / ha / yr):

Biomass conversion and expansion factor for increment (BCEFI) (t d.m. / m³ wood volume): Specified

Biomass conversion and expansion factor for standing stock (BCEFS) (t d.m. / m³ wood volume): Specified

Biomass conversion and expansion factor for wood and fuelwood removal (BCEFR) (t d.m. / m³ wood volume): Specified 0.000

Basic wood density (D) (t d.m. / m³ fresh volume):

Biomass expansion factor for conversion of annual net increment to above-ground biomass increment (BEF1) (t d.m. / m³ fresh volume):

Biomass expansion factor for conversion of merchantable volume to above-ground biomass (BEF2) (t d.m. / m³ fresh volume):

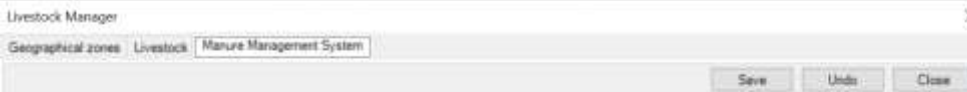
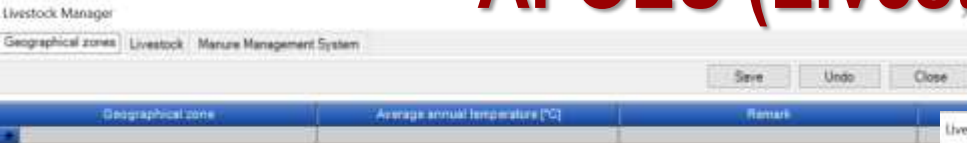
Reference soil organic carbon stock (SOCref) (t C / ha): 0.000

Relative C stock change factors

Land use (FLU): 1.000 Management (FMG): 1.000 Input (FI): 1.000

Add Copy Delete Save Undo Close

Administrate AFOLU (Livestock Manager)



lined Livestock categories will show under 3.A.1) and 3.A.2) respectively (Other - please specify)

Worksheets

IPCC Inventory Software - sandro - [Worksheets]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

2006 IPCC Categories

- 1 - Energy
 - 1.A - Fuel Combustion Activities
 - 1.A.1 - Energy Industries
 - 1.A.1.a - Main Activity B
 - 1.A.1.a.i - Electricity**
 - 1.A.1.a.i.ii - Combined
 - 1.A.1.a.iii - Heat Plant
 - 1.A.1.b - Petroleum Refin
 - 1.A.1.c - Manufacture of
 - 1.A.1.c.i - Manufactur
 - 1.A.1.c.ii - Other Ener
 - 1.A.2 - Manufacturing Industr
 - 1.A.2.a - Iron and Steel
 - 1.A.2.b - Non-Ferrous Me
 - 1.A.2.c - Chemicals
 - 1.A.2.d - Pulp, Paper and
 - 1.A.2.e - Food Processin
 - 1.A.2.f - Non-Metallic Min
 - 1.A.2.g - Transport Equip
 - 1.A.2.h - Machinery
 - 1.A.2.i - Mining (excludin
 - 1.A.2.j - Wood and wood
 - 1.A.2.k - Construction
 - 1.A.2.l - Textile and Leat
 - 1.A.2.m - Non-specified I
 - 1.A.3 - Transport

Fuel Combustion Activities

Worksheet

Sector: Energy

Category: Fuel Combustion Activities

Subcategory: 1.A.1.a.i - Electricity Generation

Sheet: CO2, CH4 and N2O from fuel combustion by source categories - Tier 1

Data

Fuel Type: Liquid Fuels

Uncertainties for Liquid Fuels

Conversion Factor Type: NCV GCV

Liquid Fuels	Energy Consumption			CO2		CH4		N2O			
	A Consumption (Mass, Volume or Energy Unit)	B Consumption Unit	C Conversion Factor (TJ/Unit) (NCV)	D Consumption (TJ) (C=A*B)	E CO2 Emission Factor (kg CO2/TJ)	F Amount Captured (Gg CO2)	G CO2 Emissions (Gg CO2) E=C*D/10 %Z	H CH4 Emission Factor (kg CH4/TJ)	I CH4 Emissions (Gg CH4) G=C*H/10 %G	J N2O Emission Factor (kg N2O/TJ)	K N2O Emissions (Gg N2O) I=C*H/10 %I
Fuel		Gg									
Total				0			0		0		0

Time Series data entry... Dates selected from...

Worksheet remarks

1.A.1.a.i - Time Series

CARBON DIOXIDE (CO2) Emissions (Gg CO2 Equivalents)

* Base year for assessment of uncertainty in trend: 1990

Gas: CARBON DIOXIDE (CO2)

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: (C:\ProgramData\IPCC\2006Software\ipcc2006.mdb)

Planned to add an
"Documentation Box"

Worksheets (timeseries data entry)

Time Series Data Entry

1.A.1.a.i - Electricity Generation

Sector Energy
Category Fuel Combustion Activities
Category code 1.A.1.a.i - Electricity Generation
Sheet Fuel Consumption Data

Parameter Consumption (Mass, Volume or Energy Unit)

Subdivision	Fuel	1990	2020
Region A	Crude Oil	500	
Region B		50	
Region C	sandro	300	

This worksheet allows Ctrl+C/Ctrl+V to copy/paste data. Only editable cells can be overwritten when pasting.

Export to Excel Import from Excel Save current row

Time Series

Consumption (Mass, Volume or Energy Unit)

Year	Consumption
1990	500
2020	

Worksheets (timeseries data entry)

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F
1	Generated:	14/04/2022 13:42:22				
2	Country:	Japan				
3	Sector:	Energy				
4	Category:	Fuel Combustion Activities				
5	Subcategory:	1.A.1.a.i - Electricity Generation				
6	Sheet:	Fuel Consumption Data				
7	Parameter:	Consumption (Mass, Volume or Energy Unit)				
8						
9	Subdivision	Fuel	Fuel GUID	1990	2020	
10	Region A	Crude Oil	00000001-0000-0000-0000-000000000000	500		
11	Region B	Crude Oil	00000001-0000-0000-0000-000000000000	50		
12	Region C	sandro	37eb44ea-6713-4bb2-9fcb-ec5744f788b8	300		
13						

Worksheets (uncertainties)

Uncertainties by Fuel Type ×

Liquid Fuels

Category

Activity Data Uncertainties

Lower Upper

Emission Factors Uncertainties

Gas

Lower Upper

Tools (Reference Approach)

IPCC Inventory Software - sandro - [1.A - Reference Approach]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

Reference Approach Data Estimating Excluded Carbon Comparison

Sector: Energy
 Category: Fuel combustion activities
 Category code: 1.A
 Sheet: 1 of 1 (CO2 from energy sources - Reference Approach)

1990

Fuel Types	Unit	Step 1			Step 2		Step 3			
		A Production	B Imports	C Exports	D International bunkers	E Stock change	F Apparent Consumption	G Conversion Factor (TJ/unit)	H Apparent Consumption (TJ)	I Carbon content (t C/TJ)
(+) Liquid Fuels: 22 item(s)								0		0
(+) Solid Fuels: 11 item(s)								0		0
(+) Gaseous Fuels: 1 item(s)								0		0
(+) Other Fossil Fuels: 3 item(s)								0		0
(+) Peat: 1 item(s)								0		0
Total								0		0

1) Values in column K are taken from column E of Estimating Excluded Carbon worksheet

Export to Excel Import from Excel

Time Series

Emissions (Gg CO2 Equivalents)

* Base year for assessment of uncertainty in trend: 1990

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: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

Downloadable/Uploadable via excel

- Reference Approach
- Uncertainty Analysis
- Key Category Analysis

Tools (Uncertainty Analysis)

IPCC Inventory Software - sandro - [Uncertainty Analysis]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

Uncertainty Analysis - Approach 1 (Table 3.2)

Base year for assessment of uncertainty in trend: 1990 Year T: 1990

2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 equivalent)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance in Year T
1.A - Fuel Combustion Activities						
1.A.3.b.vi - Urea-based catalysts	CO2	0.000	0.000	0.000	0.000	
1.B.1 - Fugitive Emissions from Fuels - Solid Fuels						
1.B.1.a.i.1 - Mining	CO2	0.000	0.000	0.000	0.000	
	CH4	0.000	0.000	0.000	0.000	
1.B.1.a.i.2 - Post-mining seam gas emissions	CO2	0.000	0.000	0.000	0.000	
	CH4	0.000	0.000	0.000	0.000	
1.B.1.a.i.3 - Abandoned underground mines	CH4	0.000	5.000	0.000	5.000	
1.B.1.a.i.4 - Flaring of drained methane or conversion of methane to CO2	CH4	0.000	5.000	0.000	5.000	
	CO2	0.000	5.000	0.000	5.000	
1.B.1.a.ii.1 - Mining	CO2	0.000	0.000	0.000	0.000	
	CH4	0.000	0.000	0.000	0.000	
1.B.1.a.ii.2 - Post-mining seam gas emissions	CO2	0.000	0.000	0.000	0.000	
	CH4	0.000	0.000	0.000	0.000	
1.B.2 - Fugitive Emissions from Fuels - Oil and Natural Gas						
1.C - CO2 Transport Injection and Storage						
1.C.1.a - Pipelines	CO2	0.000	0.000	0.000	0.000	
1.C.1.b - Ships	CO2	0.000	0.000	0.000	0.000	
1.C.1.c - Other (please specify)	CO2	0.000	0.000	0.000	0.000	
1.C.2.a - Injection	CO2	0.000	0.000	0.000	0.000	

Number of decimal places: 3 Zero padding

Refresh Data Export to Excel

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: (C:\ProgramData\IPCC\2006Software\ipcc2006.mdb)

Downloadable via excel



- Reference Approach
- Uncertainty Analysis
- Key Category Analysis

Tools (Key Category Analysis)

IPCC Inventory Software - sandro - [Key Category Analysis]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

Approach 1: Level Assessment Approach 1: Trend Assessment

A	B	C	D	E	F	G
IPCC Category code	IPCC Category	Greenhouse gas	1990 Ex.t (0g CO2 Eq)	Ex.t (Gg CO2 Eq)	Ex.t	Cumulative Total of Column F
3.B.1.a	Forest land Remaining Forest land	CARBON DIOXIDE (CO2)	-2.47902	2.47902	1	1
1.A.1	Energy Industries - Liquid Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Energy Industries - Solid Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Energy Industries - Gaseous Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Energy Industries - Other Fossil Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
Energy Industries - Peat	CARBON DIOXIDE (CO2)	0	0	0	1	
	METHANE (CH4)	0	0	0	1	
	NITROUS OXIDE (N2O)	0	0	0	1	
Energy Industries - Biomass	CARBON DIOXIDE (CO2)	0	0	0	1	
	METHANE (CH4)	0	0	0	1	
	NITROUS OXIDE (N2O)	0	0	0	1	
1.A.2	Manufacturing Industries and Construction - Liquid Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Manufacturing Industries and Construction - Solid Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Manufacturing Industries and Construction - Gaseous Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1
	Manufacturing Industries and Construction - Other Fossil Fuels	CARBON DIOXIDE (CO2)	0	0	0	1
		METHANE (CH4)	0	0	0	1
		NITROUS OXIDE (N2O)	0	0	0	1

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: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

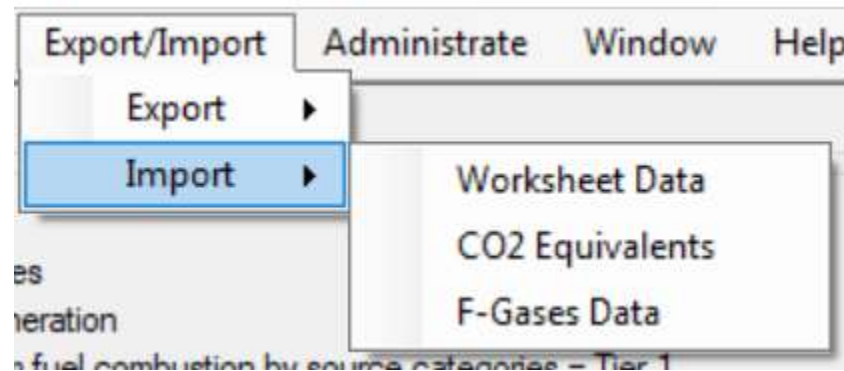
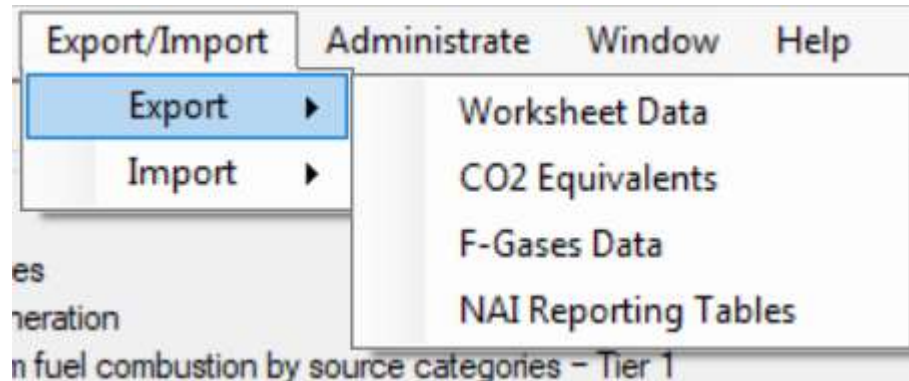
Refresh Data Export to Excel



Downloadable via excel

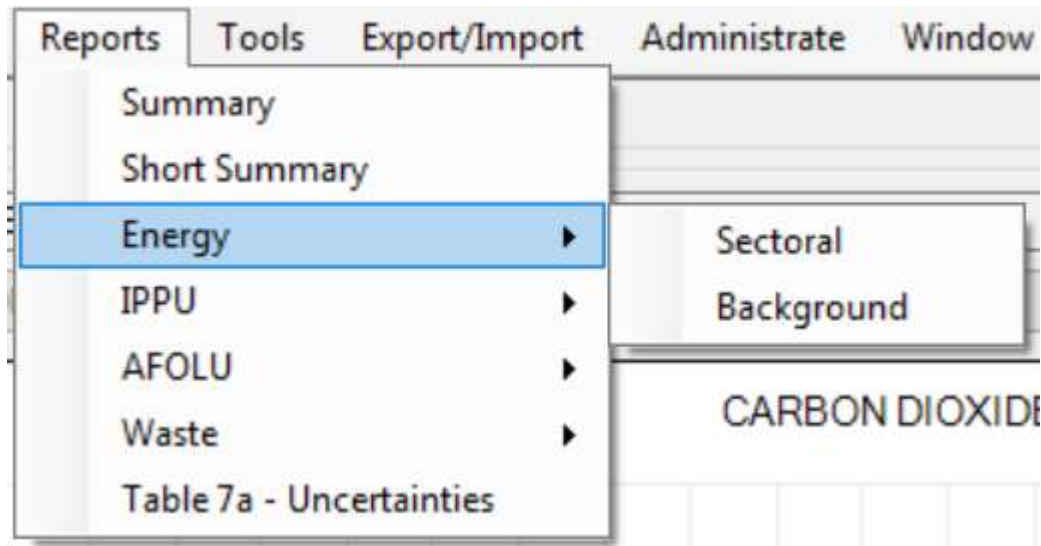


Export/Import



as XML files
but NAI excel file

Reporting



Reporting (sectoral)

IPCC Inventory Software - sandro - [Energy Sectoral Table]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

Table 1 Energy Sectoral Table Memo and Information Items

Categories	Emissions (Gg)						
	CO2	CH4	N2O	NOx	CO	NMVOCs	SO2
1 - Energy	0.000	0.000		0.000	0.000	0.000	0.000
1.A - Fuel Combustion Activities	0.000			0.000	0.000	0.000	0.000
1.A.1 - Energy Industries				0.000	0.000	0.000	0.000
1.A.1.a - Main Activity Electricity and Heat Production				0.000	0.000	0.000	0.000
1.A.1.a.i - Electricity Generation				0.000	0.000	0.000	0.000
1.A.1.a.ii - Combined Heat and Power Generation (CHP)				0.000	0.000	0.000	0.000
1.A.1.a.iii - Heat Plants				0.000	0.000	0.000	0.000
1.A.1.b - Petroleum Refining				0.000	0.000	0.000	0.000
1.A.1.c - Manufacture of Solid Fuels and Other Energy Industries				0.000	0.000	0.000	0.000
1.A.1.c.i - Manufacture of Solid Fuels				0.000	0.000	0.000	0.000
1.A.1.c.ii - Other Energy Industries				0.000	0.000	0.000	0.000
1.A.2 - Manufacturing Industries and Construction				0.000	0.000	0.000	0.000
1.A.2.a - Iron and Steel				0.000	0.000	0.000	0.000
1.A.2.b - Non-Ferrous Metals				0.000	0.000	0.000	0.000
1.A.2.c - Chemicals				0.000	0.000	0.000	0.000
1.A.2.d - Pulp, Paper and Print				0.000	0.000	0.000	0.000
1.A.2.e - Food Processing, Beverages and Tobacco				0.000	0.000	0.000	0.000
1.A.2.f - Non-Metallic Minerals				0.000	0.000	0.000	0.000
1.A.2.g - Transport Equipment				0.000	0.000	0.000	0.000
1.A.2.h - Machinery				0.000	0.000	0.000	0.000
1.A.2.i - Mining (excluding fuels) and Quarrying				0.000	0.000	0.000	0.000

Number of decimal places: 3 Zero padding

Export to Excel

Legend

(1) To be reported as a memo item, and not part of the national inventory.

(2) Multilateral operations pursuant to the Charter of the United Nations: including emissions from fuel delivered to the military in the country and delivered to the military of other countries.

(3) Emissions that are not included in the national total should be reported as memos.

* Cells to report emissions of NOx, CO, NMVOC and SO2 have not been shaded although the physical potential for emissions is lacking for some categories. **Precursors are editable.**

Documentation box

Save

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: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

Reporting (background)

IPCC Inventory Software - sandro - [Energy Background Tables]

Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help

Table 1.1 Energy Background Table: 1.A.1 - 1.A.2 Table 1.2 Energy Background Table: 1.A.3 - 1.A.5 Table 1.3 Energy Background Table: 1.B Table 1.4b Energy Background Table: 1.C - Overview Table 1.5 Energy Background Table: Refer <

2006 IPCC Categories	Emissions Solid Fuel (Gg)			Emissions Liquid Fuel (Gg)			Emissions Gas (Gg)			Emissions Other Fossil Fuels (Gg)			Emissions Peat (Gg)			Emissions Biomass			Emissions Total (Gg)			Information Items (Gg)			
	CO2	CH4	N2O	CO2	CH4	N2O	CO2	CH4	N2O	CO2	CH4	N2O	CO2	CH4	N2O	CH4	N2O	CO2	CH4	N2O	CO2	CH4	N2O	CO2 Amount Captured	Biomass CO2 emitted
1.A - Fuel Combustion Activities																		0.000	0.000	0.000					
1.A.1 - Energy Industries																		0.000	0.000	0.000					
1.A.1.a - Main Activity Electricity and Heat Production																		0.000	0.000	0.000					
1.A.1.a.i - Electricity Generation																		0.000	0.000	0.000					
1.A.1.a.ii - Combined Heat and Power Generation (CHP)																		0.000	0.000	0.000					
1.A.1.a.iii - Heat Plants																		0.000	0.000	0.000					
1.A.1.b - Petroleum Refining																		0.000	0.000	0.000					
1.A.1.c - Manufacture of Solid Fuels and Other Energy Industries																		0.000	0.000	0.000					
1.A.1.c.i - Manufacture of Solid Fuels																		0.000	0.000	0.000					
1.A.1.c.ii - Other Energy Industries																		0.000	0.000	0.000					
1.A.2 - Manufacturing Industries and Construction																		0.000	0.000	0.000					
1.A.2.a - Iron and Steel																		0.000	0.000	0.000					
1.A.2.b - Non-Ferrous Metals																		0.000	0.000	0.000					
1.A.2.c - Chemicals																		0.000	0.000	0.000					
1.A.2.d - Pulp, Paper and Print																		0.000	0.000	0.000					
1.A.2.e - Food Processing, Beverages and Tobacco																		0.000	0.000	0.000					
1.A.2.f - Non-Metallic Minerals																		0.000	0.000	0.000					
1.A.2.g - Transport Equipment																		0.000	0.000	0.000					
1.A.2.h - Machinery																		0.000	0.000	0.000					
1.A.2.i - Mining (excluding fuels) and Quarrying																		0.000	0.000	0.000					
1.A.2.j - Wood and wood products																		0.000	0.000	0.000					
1.A.2.k - Construction																		0.000	0.000	0.000					
1.A.2.l - Textile and Leather																		0.000	0.000	0.000					

Number of decimal places: 3 Zero padding

Export to Excel

Legend

Documentation box

(1) Although peat is not strictly speaking a fossil fuel, the CO2 emissions from combustion of peat are included in the national emissions as for fossil fuels. See Chapter 1 of Energy Volume, page 1.15.

(2) Information items that are not themselves emissions, therefore not included in the national total. The carbon should be converted to carbon dioxide. It is subtracted in the CO2 emission columns (net emissions). Only CO2 captured for permanent storage in geological reservoirs should be subtracted.

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: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

Reporting

Main Menu

→ Report

Report	Level	Contents
Summary (IPCC)	1.A.1	Emissions/Removals
Short summary (IPCC)	1.A	Emissions/Removals
Sectoral (IPCC)	1.A.1.a.ii (most disaggregated level)	Emissions/Removals
Background (IPCC)	1.A.1.a.ii (most disaggregated level)	AD, Emissions/Removals

Main Menu

→ Export

Report	Level	Contents
NAI 1 & 2 (UNFCCC 17/CP.8)	1.A.1	Emissions/Removals

Note: All reports can be exported as MS Excel file

Upgrades

- **Implementation of all IPCC Tiers and Approaches** provided in the **2006 IPCC Guidelines** and its **Wetlands Supplement**
 - ✓ **AFOLU & ENERGY** sectors: *work completed*
 - ✓ **IPPU & WASTE** sectors: *software upgrade ongoing*
 - ✓ **Uncertainty Analysis**: *Approaches 1&2 specification drafting*
 - ✓ **Key Category Analysis**: *Approach 2 planned*
 - ✓ **Subnational disaggregation of categories** (e.g. federal states inventories):
 - AFOLU & ENERGY sectors completed*
 - IPPU and WASTE software upgrade ongoing*
 - ✓ **Indirect CO₂ & N₂O emissions**: *specification drafting*

Upgrades

➤ Other Upgrades

- ✓ AR5 GWP₁₀₀:
- ✓ Time series export/import:
- ✓ Interoperability with the UNFCCC CRT Reporter
- ✓ Multi-users at category level:
- ✓ New version check button:
- ✓ Translation into the 5 non-English UN languages

COP26 - 5/CMA3 decision

Interoperability between the IPCC Inventory Software and the UNFCCC Common Reporting Tables (CRT) reporting software:

- requests the secretariat to provide training and advice to developing country Parties on the use of the reporting tools and to provide technical support to these countries, including those that use the Intergovernmental Panel on Climate Change inventory software, to the extent possible, on integrating the reporting tools into their national greenhouse gas inventory arrangements [paragraph 16]
- requests the secretariat to facilitate interoperability between the reporting tools and the Intergovernmental Panel on Climate Change inventory software [paragraph 19]
- invites the Intergovernmental Panel on Climate Change to engage in the work referred to in paragraph 19 above [paragraph 20]

Supporting Tools

Excel-based tool:

- HWP excel-based tool for data retrieval from FAOSTAT website and upload to the IPCC Inventory Software
- Data compilation of land representation and upload to the IPCC Inventory Software

Guidebook for inventory compilers

- ✓ To be produced sector by sector
- ✓ All UN languages
- ✓ Simulating the use of the software for each inventory category, providing most relevant references to good practice from the 2006 IPCC Guidelines and its Supplements

Supporting Tools

Add-ons for Land Representation:

- **based on wall-to-wall data collection and analysis (maps),**

Under development by FAO SEPAL Team

based on sampling data collection and analysis (inventories)

Under development through FAO-COLLECT EARTH customization

Connection with the IPCC Emission Factors DataBase

Support

TSU is supporting the IPCC Inventory Software

- ✓ User Manual
- ✓ Help Desk E-mail ipcc-software@iges.or.jp
- ✓ Pool of voluntary testers, to support software development and use
- ✓ Annual meeting on feedbacks from software users, including issues where support is needed or a software improvements is envisaged



Thank you

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

ipcc

INTERGOVERNMENTAL PANEL ON climate change

