



IPCC Inventory Software

Virtual presentation

IPCC TFI TSU

ipcc

INTERGOVERNMENTAL PANEL ON climate change



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>)

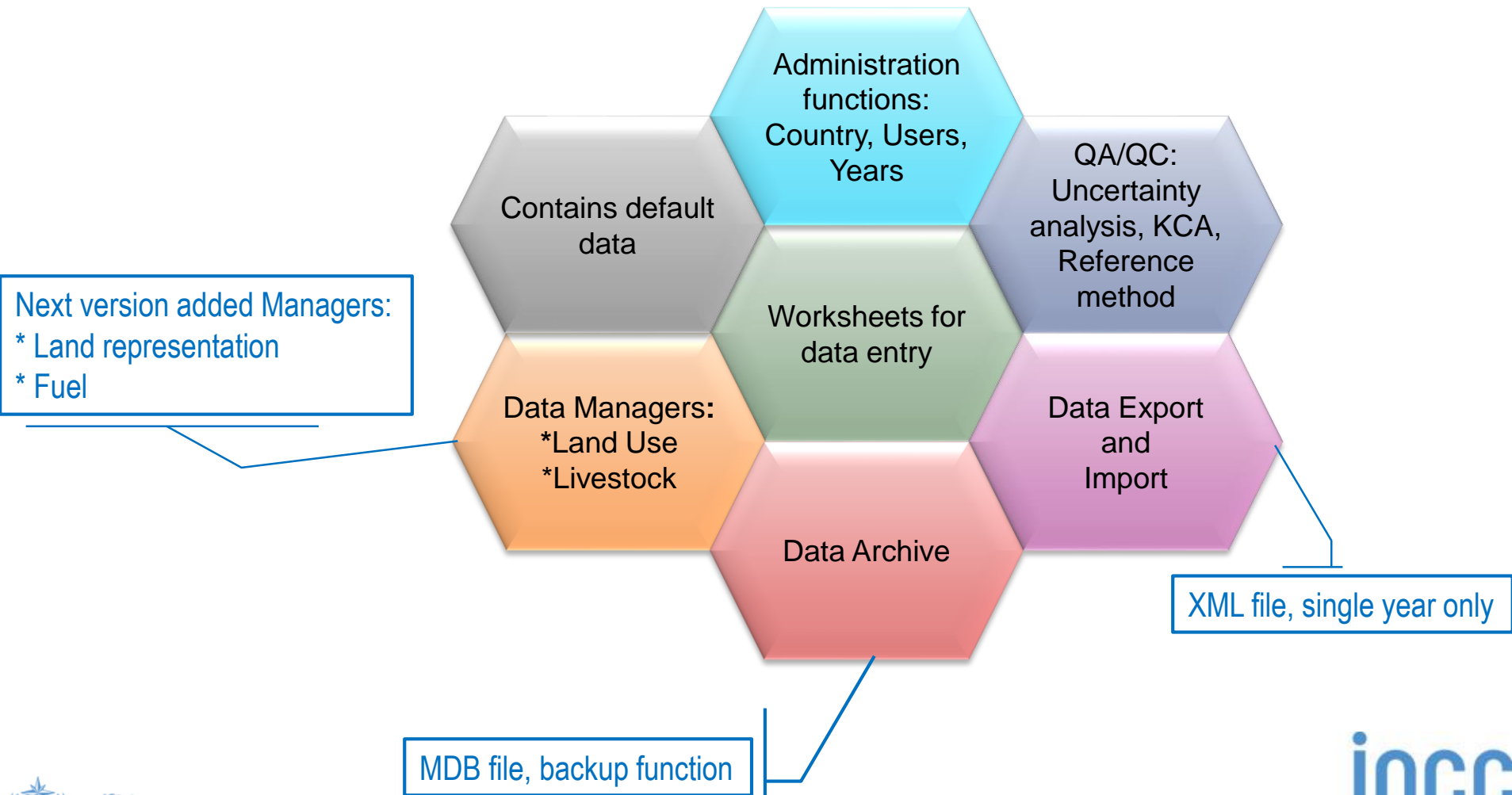
- ✓ Support to users provided by IPCC TFI TSU

- ✓ 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 Categories

- 1 - Energy
- 2 - Industrial Processes and Product Us
- 3 - Agriculture, Forestry, and Other Lan
- 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

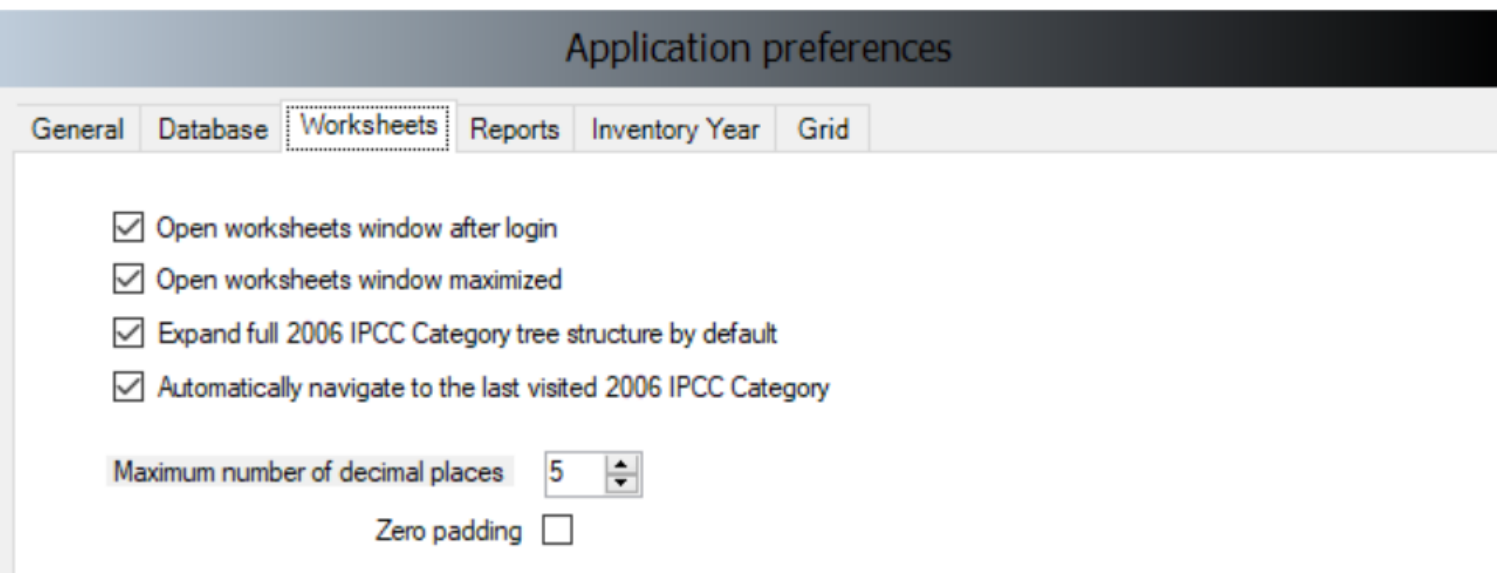
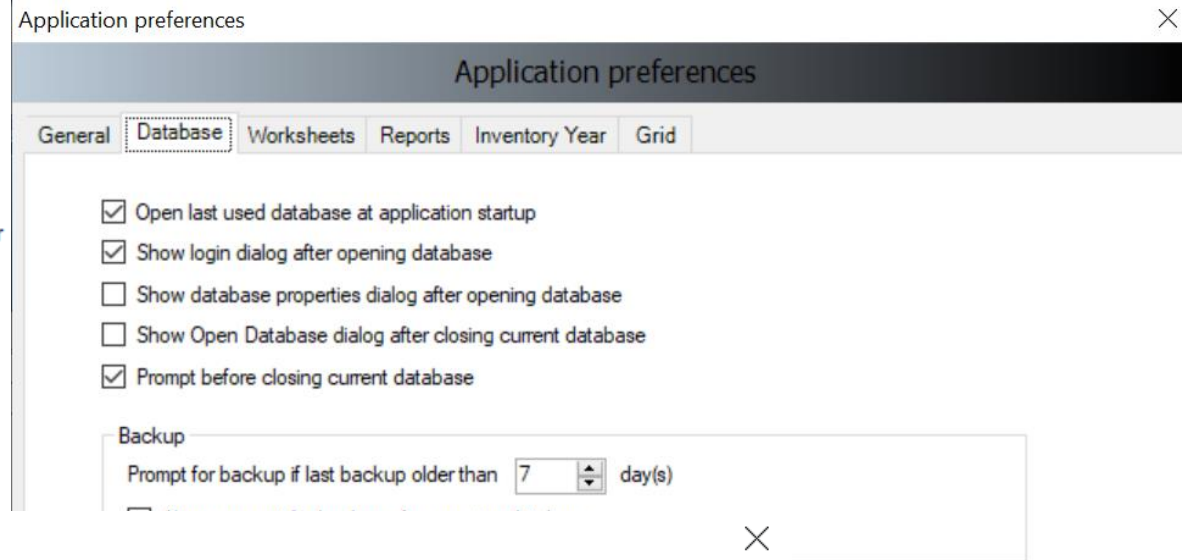
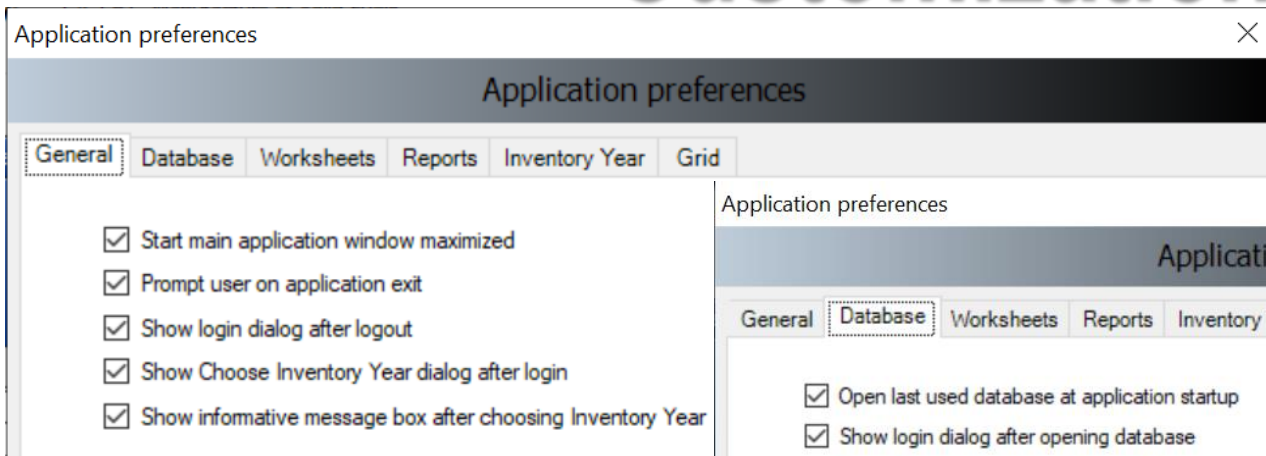
1.A.1.c.i - Time Series

Gas CARBON DIOXIDE (CO2)

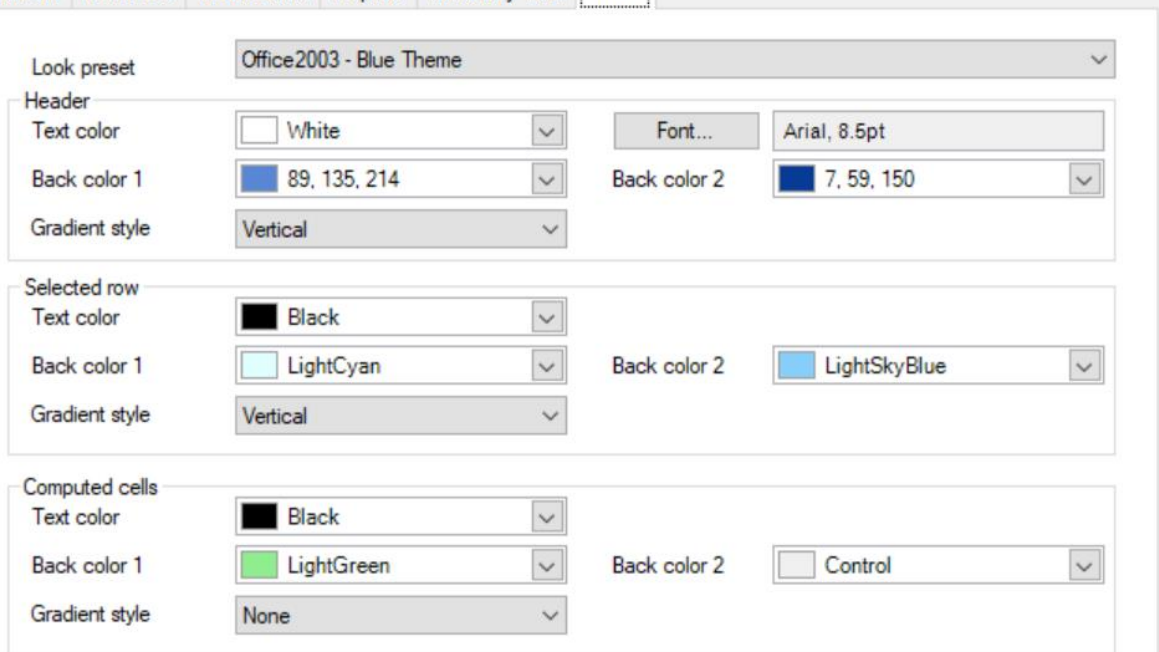
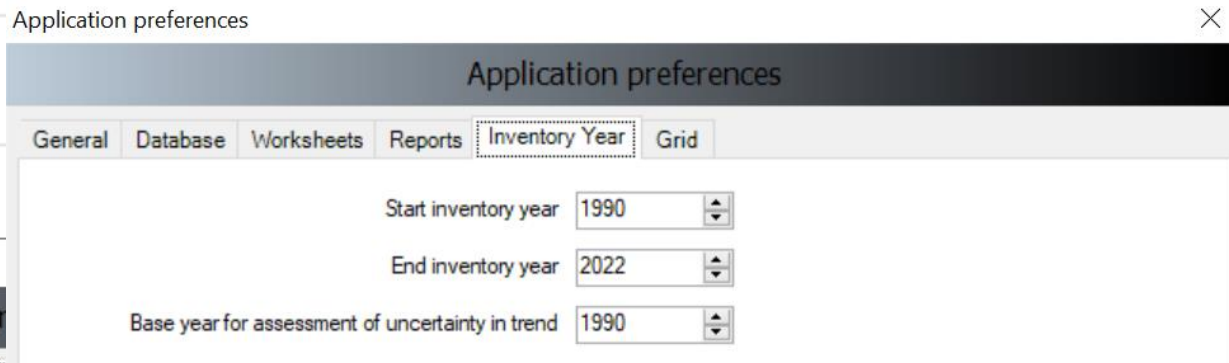
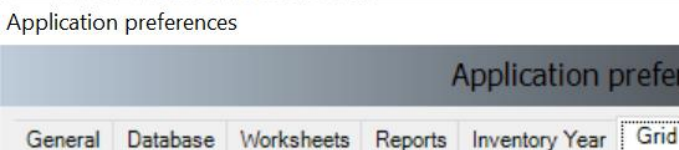
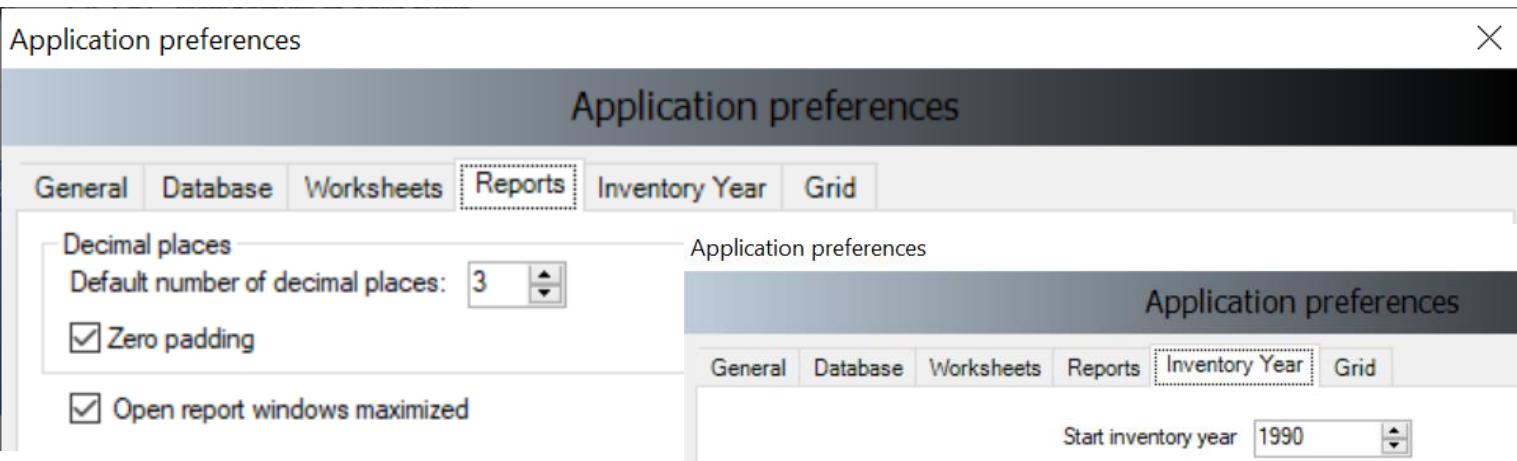
Save

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)

Customization



Customization



Database properties

Database Inventory Year

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

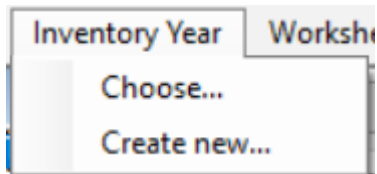
Database properties

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 Equivalent	SAR GWPs (100 year time horizon)	

Inventory Years	Users
1990 2020	TSU

Close

Database properties



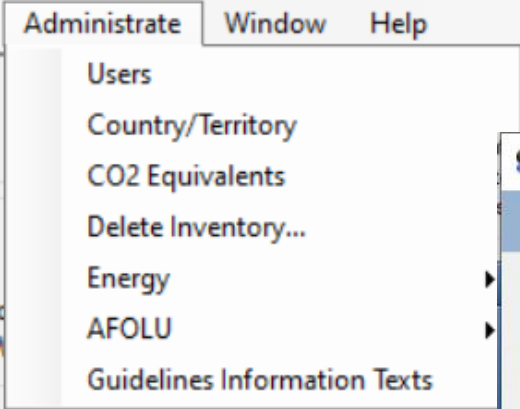
New inventory

Create new Inventory Year

New Inventory Year

Create empty inventory year
 Copy data from inventory year

Administrare



The 'User Management' dialog box is titled 'TSU'. It is divided into two main sections: 'List of Users' and 'Selected User Details'.
The 'List of Users' section shows a tree view with 'Superusers' and 'Users'. Under 'Users', 'TSU (You)' is selected.
The 'Selected User Details' section shows the user's login as 'TSU' and the 'Superuser' checkbox 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)
On the right side of the dialog, there are five buttons: 'Save', 'Add new', 'Delete', 'Set Password', and 'Close'.

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 - Product uses as substitutes for
 - 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

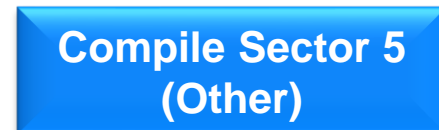
-
-
-
-

Multiple Users

Project manager



Sectoral Expert(s)



Distribute updated DB
(MDB file)



Combine Databases
(XML File)



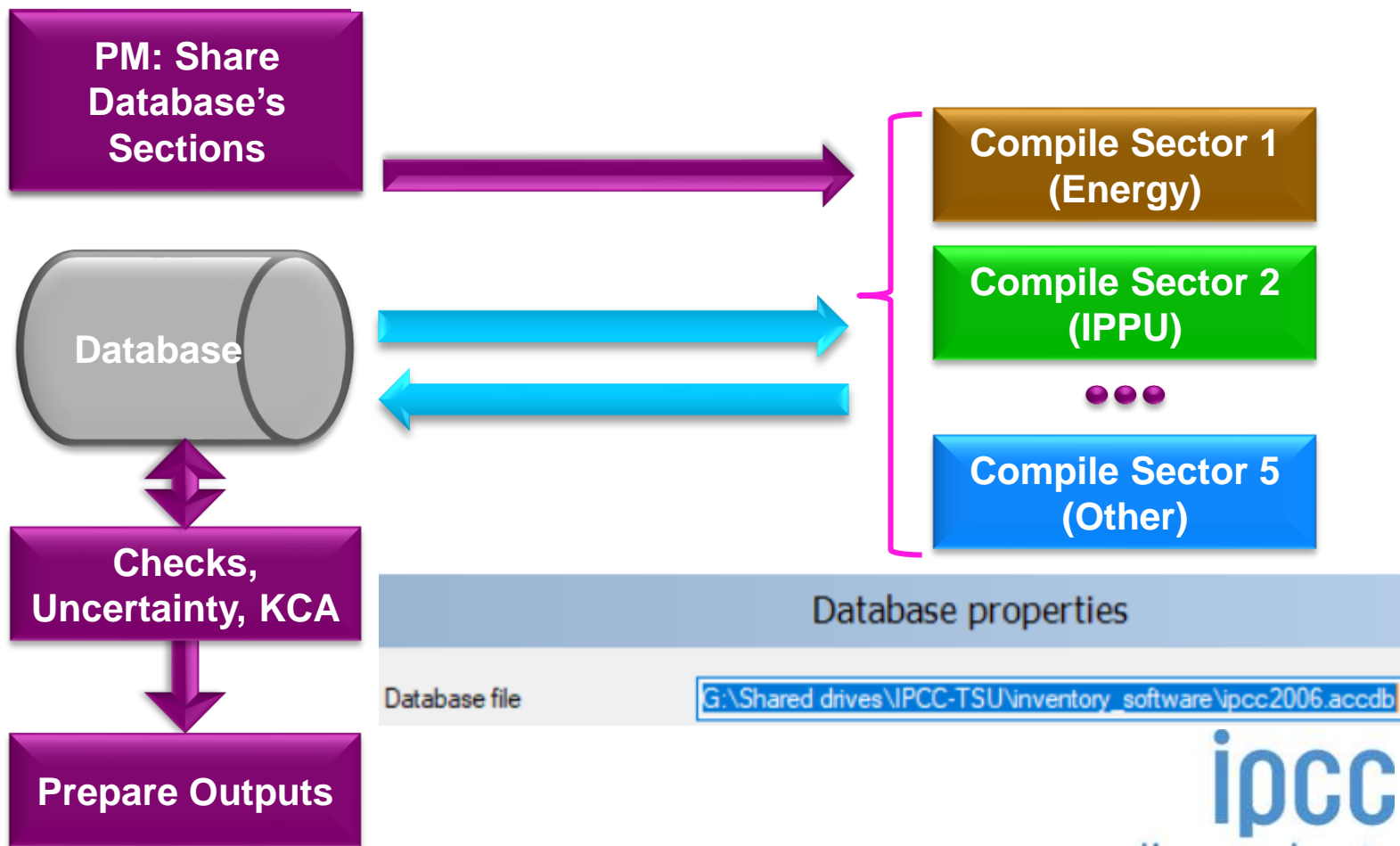
Using XML file aimed to
avoid losing or overwriting
the database unintentionally

Multiple Users

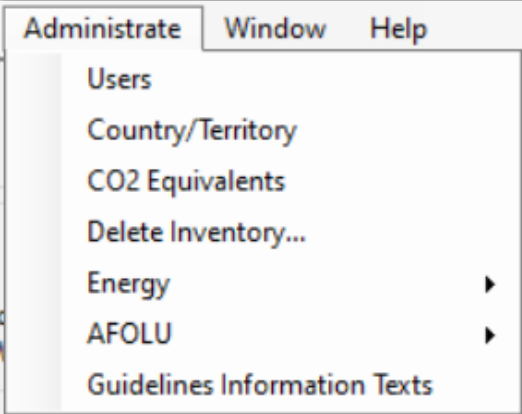
Project manager

Sectoral Expert(s)

Share Database'
sections



Administrate



Choose Country/Territory

Choose Country/Territory

Region	Asia	▼
Country/Territory	Japan	▼

OK Cancel

Administrate

- Administrate
- Window
- Help
- Users
- Country/Territory
- CO2 Equivalents
- Delete Inventory...
- Energy
- AFOLU
- Guidelines Inf

CO2 Equivalents

CO2 Equivalents

Type

SAR GWPs (100 year time horizon)

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: Natural Forest, 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 (BCEF) (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)

Livestock Manager

Geographical zones Livestock Manure Management System

Save Undo Close

Geographical zone	Average annual temperature [°C]	Remark
*		

Livestock Manager

Geographical zones Livestock Manure Management System

Save Undo Close

Category	
▶ Dairy Cows	
▶ Other Cattle	
▶ Buffalo	
▶ Sheep	
▶ Goats	
▶ Camels	
▶ Horses	
▶ Mules and Asses	
▶ Swine	
▶ Poultry	
*	

Livestock Manager

Geographical zones Livestock Manure Management System

Save Undo Close

System	Definition
<input type="checkbox"/> Pasture/Range/Paddock	The manure from pasture and range grazing animals is allowed to lie as deposited, and is not managed.
<input type="checkbox"/> Daily spread	Manure is routinely removed from a confinement facility and is applied to cropland or pasture within 24 hours of excretion.
<input type="checkbox"/> Solid storage	The storage of manure, typically for a period of several months, in unconfined piles or stacks. Manure is able to be stacked due to the presence of a sufficient amount of bedding material or loss of moisture by evaporation.
<input type="checkbox"/> Dry lot	A paved or unpaved open confinement area without any significant vegetative cover where accumulating manure may be removed periodically.
<input type="checkbox"/> Liquid/Slurry	Manure is stored as excreted or with some minimal addition of water in either tanks or earthen ponds outside the animal housing, usually for periods less than one year.
<input type="checkbox"/> Uncovered anaerobic lagoon	A type of liquid storage system designed and operated to combine waste stabilization and storage. Lagoon supernatant is usually used to remove manure from the associated confinement facilities to the lagoon. Anaerobic lagoons are designed with varying lengths of storage (up to a year or greater), depending on the climate region, the volatile solids loading rate, and other operational factors. The water from the lagoon may be recycled as flush water or used to irrigate and fertilise fields.
<input type="checkbox"/> Pit storage below animal confinements	Collection and storage of manure usually with little or no added water typically below a slatted floor in an enclosed animal confinement facility, usually for periods less than one year.
<input type="checkbox"/> Anaerobic digester	Animal excreta with or without straw are collected and anaerobically digested in a large containment vessel or covered lagoon. Digesters are designed and operated for waste stabilization by the microbial reduction of complex organic compounds to CO ₂ and CH ₄ , which is captured and flared or used as a fuel.
<input type="checkbox"/> Burned for fuel	The dung and urine are excreted on fields. The sun dried dung cakes are burned for fuel.
<input type="checkbox"/> Cattle and Swine deep bedding	As manure accumulates, bedding is continually added to absorb moisture over a production cycle and possibly for as long as 6 to 12 months. This manure management system also is known as a bedded pack manure management system and may be combined with a dry lot or pasture.
<input type="checkbox"/> Composting - in vessel	Composting, typically in an enclosed channel, with forced aeration and continuous mixing.
<input type="checkbox"/> Composting - Static pile	Composting in piles with forced aeration but no mixing.
<input type="checkbox"/> Composting - Intensive windrow	Composting in windrows with regular (at least daily) turning for mixing and aeration.
<input type="checkbox"/> Composting - Passive windrow	Composting in windrows with infrequent turning for mixing and aeration.
<input type="checkbox"/> Poultry manure with litter	Similar to cattle and swine deep bedding except usually not combined with a dry lot or pasture. Typically used for all poultry breeder flocks and for the production of meat type chickens (broilers) and other fowl.
<input type="checkbox"/> Poultry manure without litter	May be similar to open pits in enclosed animal confinement facilities or may be designed and operated to dry the manure as it accumulates. The latter is known as a high-rise manure management system and is a form of passive windrow composting when designed and operated properly.
<input type="checkbox"/> Aerobic treatment	The biological oxidation of manure collected as a liquid with either forced or natural aeration. Natural aeration is limited to aerobic and facultative ponds and wetland systems and is due primarily to photoautotrophic. However, these systems typically become anoxic during periods without sunlight.

efined Livestock categories will show under 3.A.1j and 3.A.2j 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 EI
 - 1.A.1.a.i - Electricity
 - 1.A.1.a.ii - Combined
 - 1.A.1.a.iii - Heat Plan
 - 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
 - 1.A.3.a - Civil Aviation

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

1990

Data

Fuel Type: Liquid Fuels

Uncertainties for Liquid Fuels

Conversion Factor Type: NCV GCV

Liquid Fuels	Energy Consumption			CO2			CH4		N2O				
	Fuel	A Consumption (Mass, Volume or Energy Unit)	B Conversion Factor (TJ/Unit) (NCV)	C Consumption (TJ) (C=A*B)	D Emission Factor (kg CO2/TJ)	Z Amount Captured (Gg CO2)	E CO2 Emissions (Gg CO2) E=C*D/10 ^{^6} -Z	F CH4 Emission Factor (kg CH4/TJ)	G CH4 Emissions (Gg CH4) G=C*F/10 ^{^6}	H N2O Emission Factor (kg N2O/TJ)	I N2O Emissions (Gg N2O) I=C*H/10 ^{^6}		
		Gg		0		0		0		0			
Total													

Time Series data entry... Delete selected rows...

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\IPCC2006Software\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

Worksheets (timeseries data entry)

The screenshot shows an Excel spreadsheet with the following data:

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

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

	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)	J Total Carbon (Gg C)
Fuel Types											
							F=A+B-C-D-E		H=F*G		J=H*I/1000
⊕ 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

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

A	B	C	E	F	G	H
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

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)

Tools (Key Category Analysis)

IPCC Inventory Software - sandro - [Key Category Analysis]

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

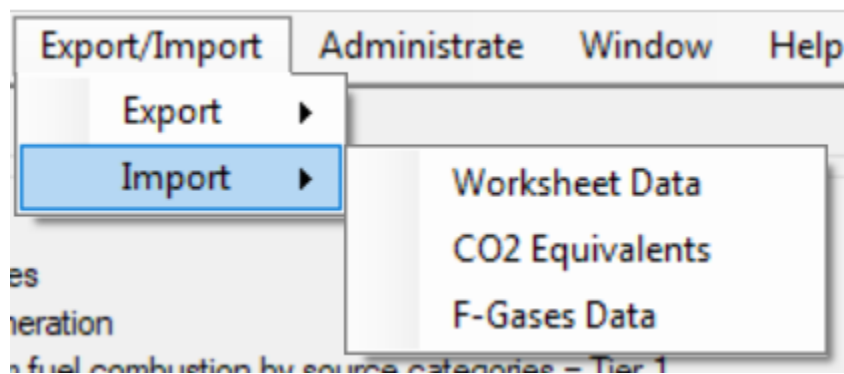
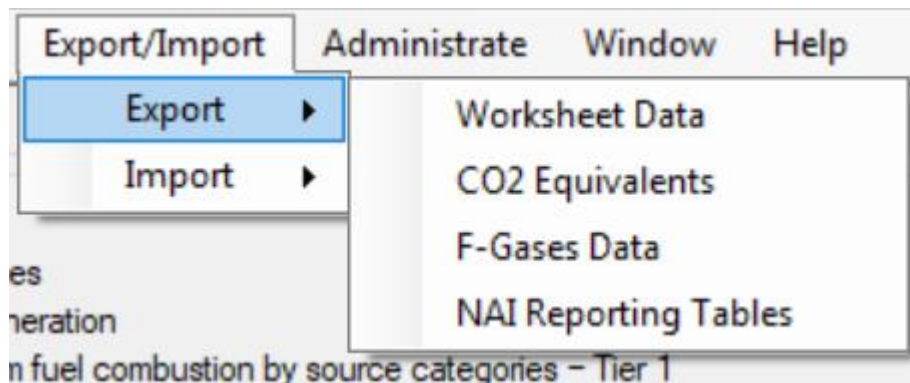
Approach 1: Level Assessment Approach 1: Trend Assessment

A	B	C	D	E	F	G
IPCC Category code	IPCC Category	Greenhouse gas	1990 Ex,t (Gg CO2 Eq)	[Ex,t] (Gg CO2 Eq)	Lx,t	Cumulative Total of Column F
3.B.1a	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

Refresh Data Export to Excel

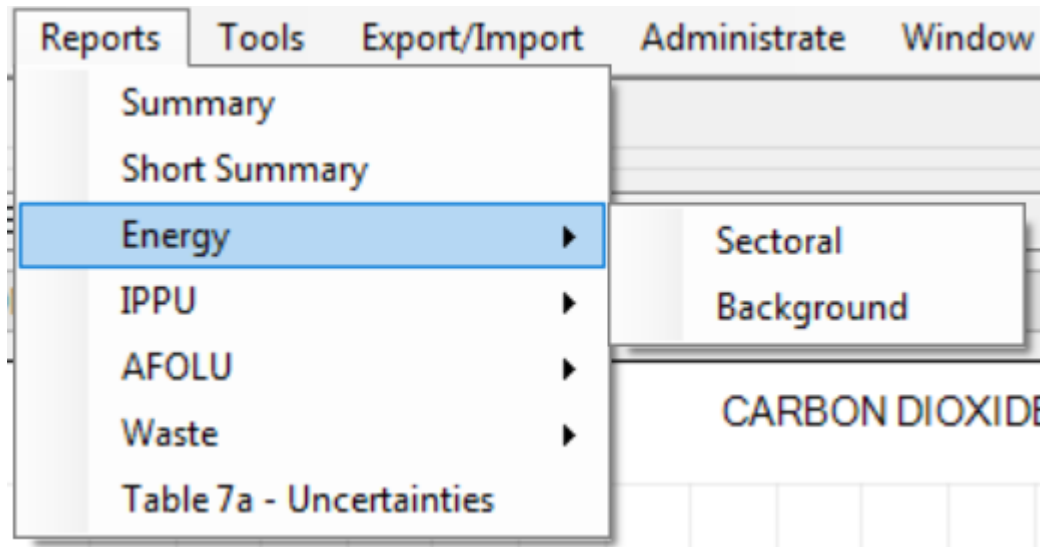
Country/Territory: Japan | Inventory Year: 1990 | Base year for assessment of uncertainty in trend: 1990 | CO2 Equivalents: SAR GWPs (100 year time horizon) | Database file: (C:\ProgramData\IPCC2006Software\ipcc2006.mdb)

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]

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 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

(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.

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

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:
 - ✓ **IPPU & WASTE** sectors:
 - ✓ **Uncertainty Analysis:**
 - ✓ **Key Category Analysis:**
 - ✓ **Subnational disaggregation of categories** (e.g. federal states inventories):
 - AFOLU & ENERGY*
 - IPPU and WASTE*
 - ✓ **Indirect CO₂ & N₂O emissions:**

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

