



Tools supporting IPCC Guidelines

Side Event during UNFCCC SB40
5 June 2014, Bonn, Germany

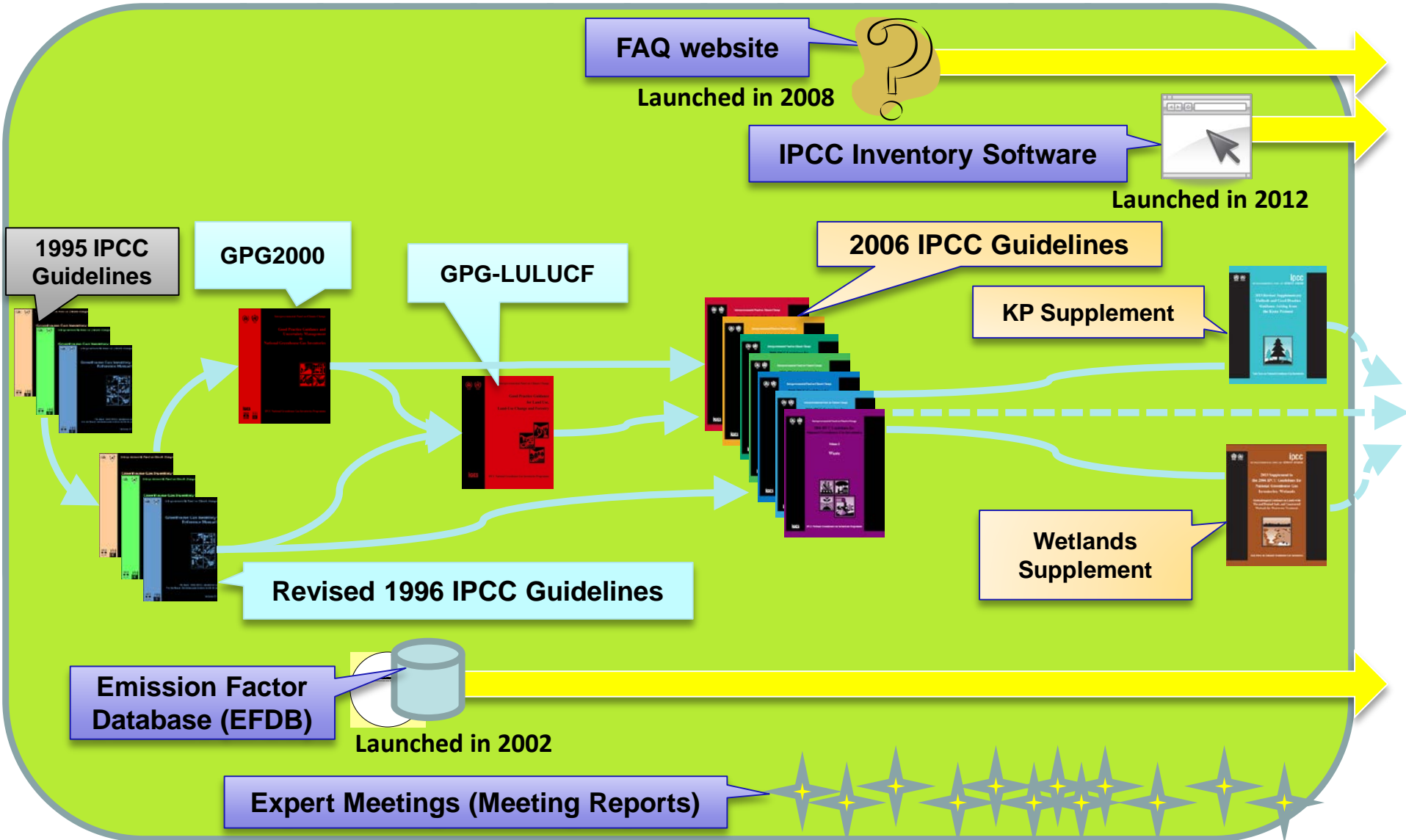
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ipcc

INTERGOVERNMENTAL PANEL ON climate change

Various Tools Supporting IPCC Guidelines

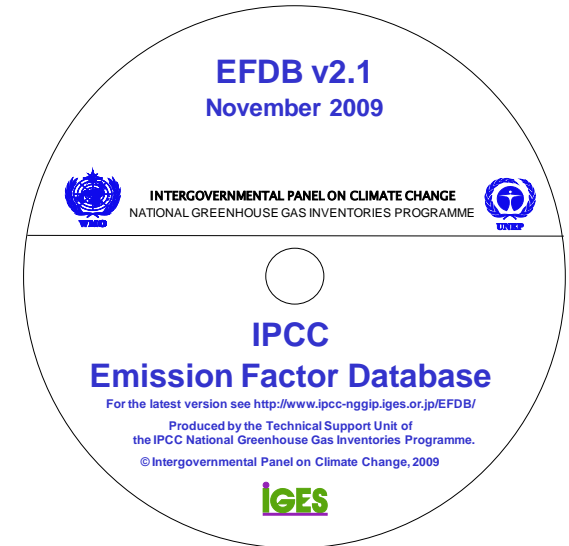
1995 1996 ... 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014



Emission Factor Database (EFDB)

- Emission Factor Database (EFDB)

- Library of a wide range of well-documented emission factors and other parameters to help users (inventory compilers) select those that best reflect their national circumstances
- Supplements all the IPCC Guidelines/GPG
- Available through the internet and in the form of CD-ROM
- Efforts being continuously made to get a wider range of EFs (expert meetings for data collection, literature search, etc.)
- Open to relevant data proposals – **New proposals welcomed!!**
 - New data will be evaluated for acceptance by EFDB Editorial Board.



<http://www.ipcc-nggip.iges.or.jp/EFDB/>

Find EF - Search criteria



Click [here](#) for online help.

IPCC Guidelines version:

Several search options available

IPCC Source/Sink Category

Root -> Waste (4) -> Wastewater Treatment and Discharge (4.D)

- ▶ 4.D.1: Domestic Wastewater Treatment and Discharge 
- ▶ 4.D.2: Industrial Wastewater Treatment and Discharge 

Specify the criteria such as IPCC source/sink category, gases, and click "Apply"

Gases

Gas name	Formula	Select gas <input checked="" type="checkbox"/>
CARBON DIOXIDE	CO2	<input type="checkbox"/>
METHANE	CH4	<input checked="" type="checkbox"/>
NITROUS OXIDE	N2O	<input checked="" type="checkbox"/>

Status of search

Results can be exported in excel format

Status

- ▶ IPCC 2006 Source/Sink Category: Waste (4) -> Wastewater Treatment and Discharge (4.D) -> Domestic Wastewater Treatment and Discharge (4.D.1)
- ▶ Gases: CH4, N2O
- ▶ Number of emission factors covered by your criteria: 129

<< Back to Find EF Start Page

Further growing importance of EFDB

- In the context of revision of the UNFCCC reporting guidelines for Annex I Parties, the SBSTA32 welcomed the work of the IPCC to facilitate the use of the 2006 IPCC Guidelines, including its efforts to develop inventory software and the *Emission Factor Database*. It invited the IPCC and other relevant organizations to strengthen their efforts in this area (FCCC/SBSTA/2010/6, paragraph 76)
- In the context of REDD discussion, the SBSTA32 requested the UNFCCC secretariat to work with the IPCC on promoting the use of the IPCC *Emission Factor Database* (FCCC/SBSTA/2010/6, paragraph 40)
- In the context of national communications from non-Annex I Parties (NAI-NC), the Consultative Group of Experts (CGE):
 - Agreed on the usefulness of *Emission Factor Database*; and
 - Recommended improvement of data quality by enhancement of the sharing of country-specific emission factors through the *Emission Factor Database* among NAI Parties, as an element to be considered in a future revision of the NAI-NC Guidelines (FCCC/SBI/2011/5/Rev.1)

IPCC Inventory Software

- The latest version was released on 28 Nov 2013.
- It implements the 2006 IPCC Guidelines, but it can also be used for reporting under the Revised 1996 IPCC Guidelines.
 - Countries can use the improved methods and updated default data.
- It can be used for the whole inventory or individual categories.
- It includes Uncertainty & Key Category Analysis and aids QA/QC
- Will output in Non-Annex I National Communications format
- It improves on earlier software.
 - It is stand-alone – does not depend on specific versions of MS Windows or MS Office.
 - Does not require internet access or expensive hardware



Free!

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

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

Main menu

Category selected: Energy

- IPCC 2006 Categories
 - 1 - Energy
 - 1.A - Fuel Combustion Activities
 - 1.A.1 - Energy Industries
 - 1.A.1.a - Main Activity Electricity and Heat P
 - 1.A.1.a.i - Electricity Generation
 - 1.A.1.a.ii - Combined Heat and Power Ge
 - 1.A.1.a.iii - Heat Plants
 - 1.A.1.b - Petroleum Refining
 - 1.A.1.c - Manufacture of Solid Fuels and Oth
 - 1.A.1.c.i - Manufacture of Solid Fuels
 - 1.A.1.c.ii - Other Energy Industries
 - 1.A.2 - Manufacturing Industries and Constructio
 - 1.A.2.a - Iron and Steel
 - 1.A.2.b - Non-Ferrous Metals
 - 1.A.2.c - Chemicals
 - 1.A.2.d - Paper and Print
 - 1.A.2.e - Food Processing, Beverages and To
 - 1.A.2.f - Non-Metallic Minerals
 - 1.A.2.g - Transport Equipment
 - 1.A.2.h - Machinery
 - 1.A.2.i - Mining (excluding oil and gas)
 - 1.A.2.j - Wood and wood products
 - 1.A.2.k - Construction
 - 1.A.2.l - Textile and leather
 - 1.A.2.m - Non-specified
 - 1.A.3 - Transport
 - 1.A.3.a - Civil Aviation
 - 1.A.3.a.i - International
 - 1.A.3.a.ii - Domestic
 - 1.A.3.b - Road Transport
 - 1.A.3.b.i - Cars
 - 1.A.3.b.i.1 - Passenger cars with 3-wa
 - 1.A.3.b.i.2 - Passenger cars without 3
 - 1.A.3.b.ii - Light-duty trucks
 - 1.A.3.b.ii.1 - Light-duty trucks with 3-
 - 1.A.3.b.ii.2 - Light-duty trucks without
 - 1.A.3.b.iii - Heavy-duty trucks and buses
 - 1.A.3.b.iv - Motorcycles
 - 1.A.3.b.v - Evaporative emissions from ve
 - 1.A.3.b.vi - Urea-based catalysts
 - 1.A.3.c - Railways
 - 1.A.3.d - Water-borne Navigation
 - 1.A.3.d.i - International water-borne navit

Hierarchical list of categories

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 - T

Fuel Type: (All fuels)

Conversion Factor Type: NCV GOV

Fuel	Energy Consumption		CO2		CH4		N2O			
	A Consumption (Mass, Volume or Energy Unit)	B Conversion Factor (T/Unit) (NCV)	C Consumption (TJ) (C=A*B)	D CO2 Emission Factor (kg CO2/TJ)	E Amount Captured (Gg CO2)	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)	
Anthracite	1000	Gg	26.7	26700	96300	26***	1	0.0***	1.5	0.04***
Coking Coal	2000	Gg	28.2	56400	94600	53***	1	0.0***	1.5	0.0846
Other Bitu***	3090	Gg	25.8	77400	94600	73***	1	0.0***	2	0.1548
Sub-Bitumi***	4000	Gg	19.0	36000	96100	72***	1	0.0***	1.5	0.1134
Lignite	5000	Gg	10.0	101000	500	55***	1	0.0***	1.5	0.08***
Oil Shale /***	500	Gg	10.0	107000	107000	47***	NE	0	1.5	0.00***
	600	Gg			97500	12***	1	0.0***	1.5	0.01***
	300	Gg			77000	63***	3	0.0***	0.6	0.00***
				320720		303791		0.33277		0.51236

Data Entry

Worksheet-based calculations follow 2006 Guidelines

Time Series Display

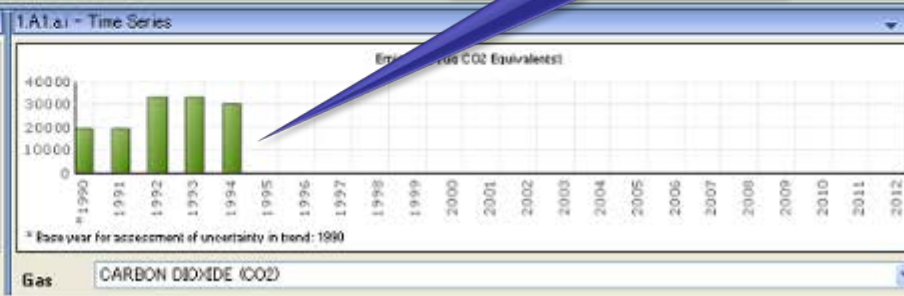
IPCC 2006 Guidelines

Worksheet remarks:

Save

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

Gas: CARBON DIOXIDE (CO2)



FAQ Website

- Answers to Frequently Asked Questions (FAQs) such as:
 - Q1-3-2: "What is the difference between accuracy and precision? Does uncertainty assessment relate to both?"
 - Q2-10: "According to the IPCC Guidelines CO₂ Emissions from the combustion of biomass are reported as zero in the Energy sector. Do the IPCC Guidelines consider biomass used for energy to be carbon neutral?"

❖ Continuously updated

<http://www.ipcc-nggip.iges.or.jp/faq/faq.html>

The screenshot shows the website for the Task Force on National Greenhouse Gas Inventories. The header includes the text "Task Force on National Greenhouse Gas Inventories" and the IPCC logo with the text "INTERGOVERNMENTAL PANEL ON climate change". Logos for WMO and UNEP are also present. A search bar contains the text "IPCC web sites". The main content area is titled "FAQs" and "Frequently Asked Questions". A list of questions is displayed, with the first question being "1. IPCC Task Force on National Greenhouse Gas Inventories (TFI), general guidance and other inventory issues". Below this, there is a sub-section "1.1. Questions about IPCC National Greenhouse Gas Inventories Programme" containing four numbered questions: "Q1-1.1. What is the role of the IPCC in Greenhouse Gas Inventories and reporting to the UNFCCC?", "Q1-1.2. How does the IPCC produce its Inventory Guidelines?", "Q1-1.3. What are the required steps to be taken to have an inventory methodology accepted by the IPCC?", and "Q1-1.4. How can new data and information be taken up by the IPCC NGGIP?". A "printable version" link with a PDF icon is visible next to the first question.

Expert Meetings

- Meant to support users of the IPCC Guidelines through expert meetings addressing various topics of interest, e.g.:
 - ❖ Revisiting the Use of Managed Land as a Proxy for Estimating National Anthropogenic Emissions and Removals
(São Paulo, Brazil, 5-7 May 2009)
 - ❖ Uncertainty and Validation of Emission Inventories
(Utrecht, the Netherlands, 23-25 March 2010)
 - ❖ Use of Facility and Project Information in National Inventories
(Wellington, New Zealand, 18-20 July 2011)
 - ❖ Role of Remote Sensing in Forest and National GHG Inventories
(Hayama, Japan, 23-25 October 2012)
 - ❖ Fugitive Emissions of GHGs from Oil and Natural Gas Systems
(Washington D.C., USA, 20-22 August 2013)
- Meeting reports are available at:

<http://www.ipcc-nggip.iges.or.jp/meeting/meeting.html>

As Part of Evolution of IPCC Guidelines

- These tools can play a more important role than just assisting inventory compilers in using the IPCC Guidelines.
- As companions for the IPCC Guidelines, they can keep the IPCC Guidelines always virtually up-to-date and improving.
 - ❖ EFDB could be used not only to provide Tier 2 data, but also to provide updated or supplementary information on the “default” values in the IPCC Guidelines.
 - ❖ FAQ website can be used not only to quote texts from the IPCC Guidelines, but also to elaborate and clarify misleading/unclear guidance in the IPCC Guidelines, or to provide updated information.
 - ❖ Expert meetings (and their reports) can provide more detailed and/or up-to-date advice to supplement the IPCC Guidelines.

As Part of Evolution of IPCC Guidelines

- IPCC Guidelines – rather static nature
 - ❖ Major improvements can be made periodically by revision
- Tools supporting the IPCC Guidelines – dynamic nature
 - ❖ Supplementary improvements can be made continuously.
- Tools can make the evolution of IPCC inventory methodology more dynamic and up-to-date.
- **However**, it should be noted:
 - ❖ IPCC Guidelines (IPCC Methodology Reports) were subject to formal IPCC review processes and officially adopted/accepted by the IPCC Plenary.
 - ❖ The tools have not been subject to formal IPCC review processes.
 - ❖ Therefore, the contents of tools cannot replace the IPCC Guidelines.

- Home IPCC
- IPCC-TFI Home**
- Organization
- Technical Support Unit
- NGGIP Publications
- Presentations
- Meetings
- Support to Inventory Compilers
- FAQs
- Links
- Emission Factor Database (EFDB)
- Electronic Discussion Group (EDG)

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) in 1988. Its main objective was to assess scientific, technical and socio-economic information relevant to the understanding of human induced climate change, potential impacts of climate change and options for mitigation and adaptation. The IPCC has completed four assessment reports, developed methodology guidelines for national greenhouse gas inventories, special reports and technical papers. For more information on the IPCC, its activities and publications, please see the [IPCC homepage](#).

The IPCC National Greenhouse Gas Inventories Programme (IPCC-NGGIP) had been undertaken since 1991 by the IPCC WG I in close collaboration with the Organisation for Economic Co-operation and Development (OECD) and the International Energy Agency (IEA).

[[More about IPCC-NGGIP](#)]

IPCC-NGGIP Publication



- [2006 IPCC Guidelines for National Greenhouse Gas Inventories](#)
- [Good Practice Guidance for Land Use, Land-Use Change and Forestry](#)
- [Default and Methodological Options to Inventory Emissions from Land Use, Land-Use Change and Forestry](#)
- [Guidance on the Use of the Good Practice Guidance for Land Use, Land-Use Change and Forestry](#)
- [Guidance on the Use of the Good Practice Guidance for Land Use, Land-Use Change and Forestry](#)

[[More Publications](#)]

Thank you!
For further information, please visit our
website.

<http://www.ipcc-nggip.iges.or.jp/>