



# IPCC Emission Factor Database (EFDB)

IPCC TFI Side-event at the COP-23

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INTERGOVERNMENTAL PANEL ON climate change

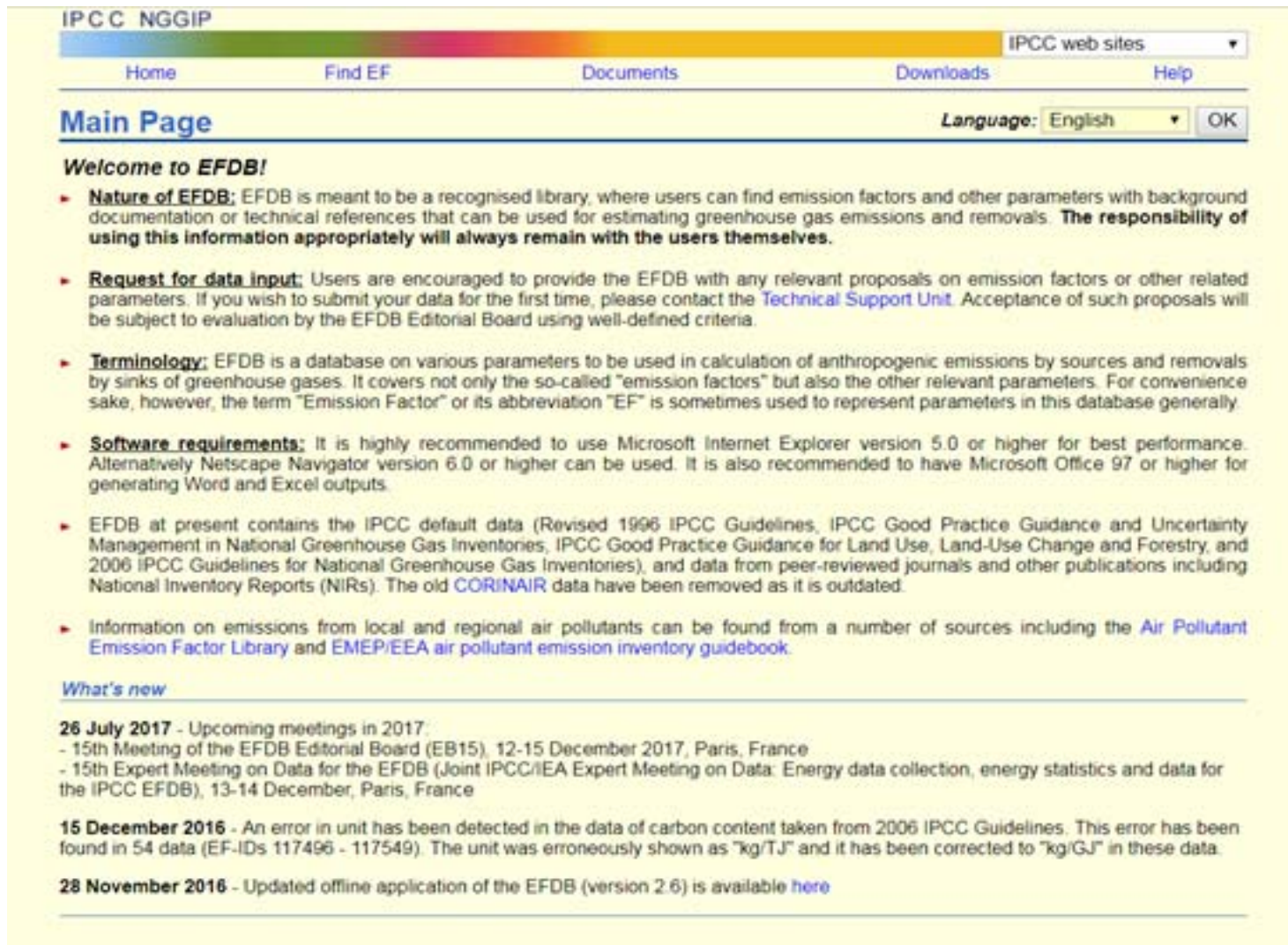


# What is EFDB?

- Emission Factor Database (EFDB) is an electronic library of greenhouse gas emission factors/parameters (EFs):
  - *default values from IPCC Guidelines*
  - *data from peer-reviewed papers*
  - *data from non-peer reviewed publications (governmental reports, industry studies, etc.)*
- Available for free:
  - *off-line: CD/DVD/USB*
    - *Version 2.7 (November, 2017) can be downloaded from the web-site*
  - *on-line: <http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>*

The Web application is the core of this system. New data will be made available in the Web application first

# On-line version of EFDB (web-site)



The screenshot shows the main page of the IPCC NGGIP EFDB website. At the top, there is a navigation bar with links for Home, Find EF, Documents, Downloads, and Help. A dropdown menu for 'IPCC web sites' is visible on the right. Below the navigation bar, there is a 'Main Page' section with a language selector set to 'English'. The main content area features a 'Welcome to EFDB!' heading followed by a list of bullet points providing information about the database's nature, data input requests, terminology, software requirements, and data sources. A 'What's new' section follows, listing recent updates and meetings.

IPCC NGGIP

Home Find EF Documents Downloads Help

IPCC web sites

Main Page Language: English OK

**Welcome to EFDB!**

- **Nature of EFDB:** EFDB is meant to be a recognised library, where users can find emission factors and other parameters with background documentation or technical references that can be used for estimating greenhouse gas emissions and removals. **The responsibility of using this information appropriately will always remain with the users themselves.**
- **Request for data input:** Users are encouraged to provide the EFDB with any relevant proposals on emission factors or other related parameters. If you wish to submit your data for the first time, please contact the [Technical Support Unit](#). Acceptance of such proposals will be subject to evaluation by the EFDB Editorial Board using well-defined criteria.
- **Terminology:** EFDB is a database on various parameters to be used in calculation of anthropogenic emissions by sources and removals by sinks of greenhouse gases. It covers not only the so-called "emission factors" but also the other relevant parameters. For convenience sake, however, the term "Emission Factor" or its abbreviation "EF" is sometimes used to represent parameters in this database generally.
- **Software requirements:** It is highly recommended to use Microsoft Internet Explorer version 5.0 or higher for best performance. Alternatively Netscape Navigator version 6.0 or higher can be used. It is also recommended to have Microsoft Office 97 or higher for generating Word and Excel outputs.
- EFDB at present contains the IPCC default data (Revised 1996 IPCC Guidelines, IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry, and 2006 IPCC Guidelines for National Greenhouse Gas Inventories), and data from peer-reviewed journals and other publications including National Inventory Reports (NIRs). The old [CORINAIR](#) data have been removed as it is outdated.
- Information on emissions from local and regional air pollutants can be found from a number of sources including the [Air Pollutant Emission Factor Library](#) and [EMEP/EEA air pollutant emission inventory guidebook](#).

**What's new**

**26 July 2017** - Upcoming meetings in 2017:  
- 15th Meeting of the EFDB Editorial Board (EB15), 12-15 December 2017, Paris, France  
- 15th Expert Meeting on Data for the EFDB (Joint IPCC/IEA Expert Meeting on Data: Energy data collection, energy statistics and data for the IPCC EFDB), 13-14 December, Paris, France

**15 December 2016** - An error in unit has been detected in the data of carbon content taken from 2006 IPCC Guidelines. This error has been found in 54 data (EF-IDs 117496 - 117549). The unit was erroneously shown as "kg/TJ" and it has been corrected to "kg/GJ" in these data.

**28 November 2016** - Updated offline application of the EFDB (version 2.6) is available [here](#)

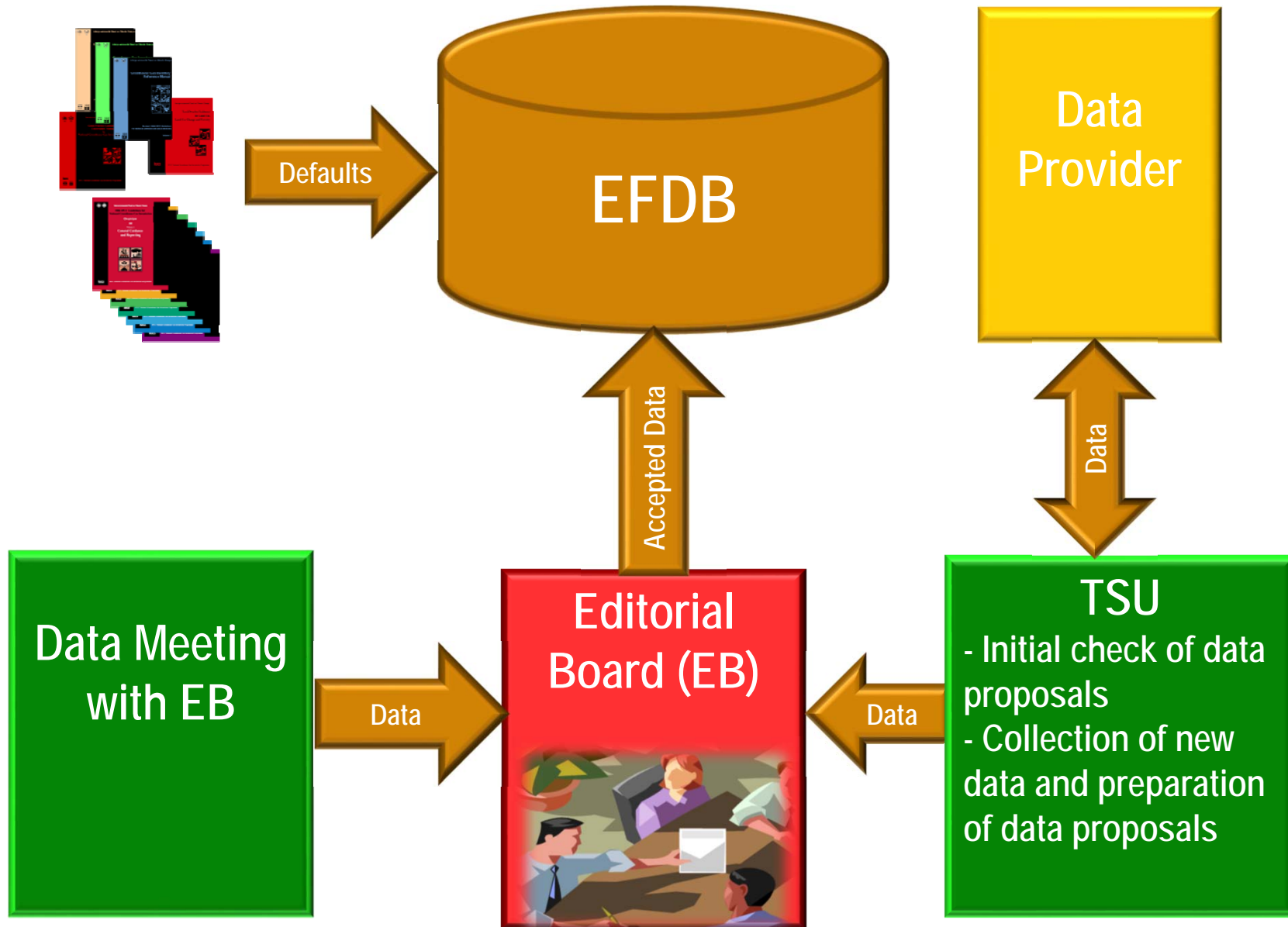
<http://www.ipcc-nggip.iges.or.jp/EFDB/>



# Why is EFDB needed?

- Quality of GHG inventories depends on reliable EFs and activity data
- EFs that reflect national circumstances should be used in inventory compilation
- Development of national EFs is costly, time consuming, and requires much expertise
- By sharing data/information EFs can be obtained cost-effectively
- An easily accessible public EFDB would help to improve the quality of national GHG inventories and facilitate data sharing by inventory compilers, experts, scientists worldwide

# Populating EFDB





# EFDB Editorial Board

- The members of the Editorial Board are selected by the Task Force Bureau on National GHG Inventories from the experts officially nominated by governments/IPCC National Focal Points. In this selection, geographical balance as well as balance of expertise should be ensured
- The Editorial Board consists of the following members:
  - a. Two Co-chairs of the Editorial Board*
  - b. Sector experts for each of the sectors\*:*
    - i. Energy*
    - ii. Industrial Processes, and Solvent and Other Product Use (IPPU)*
    - iii. Agriculture*
    - iv. Land Use, Land Use Change and Forestry (LULUCF)*
    - v. Waste*

*\* Sector experts for Agriculture and LULUCF may work together as Agriculture, Forestry and Other Land Use (AFOLU) sector in accordance with the 2006 IPCC Guidelines*

# Criteria for Inclusion of New Data

## Robust

- Within the accepted uncertainty, the value is unlikely to change if there was repetition of the original measurement programme or modelling activity

## Applicable

- An emission factor can only be applicable if the source and its mix of technology, operating and environmental conditions and abatement and control technologies under which the emission factor was measured or modelled are clear and allow the user to see how it can be applied

## Documented

- Access information to the original technical reference must be provided to evaluate the robustness and applicability as described above

# EFDB Search Function

IPCC NGGIP

Home Find EF Documents Downloads Help

IPCC web sites

## Find EF - Search criteria

Click [here](#) for online help.

IPCC Guidelines version: 2006 OK

IPCC Source/Sink Category

Root -> Energy (1) -> Fuel Combustion Activities (1.A)

- ▶ 1.A.1: Energy Industries
- ▶ 1.A.2: Manufacturing Industries and Construction
- ▶ 1.A.3: Transport
- ▶ 1.A.4: Other Sectors
- ▶ 1.A.5: Non-Specified

Fuel 2006: SOLID -> Coking Coal

### Gases

CO<sub>2</sub>, CH<sub>4</sub> & N<sub>2</sub>O OK

Gas name	Formula	Select gas
CARBON DIOXIDE	CO <sub>2</sub>	<input checked="" type="checkbox"/>
METHANE	CH <sub>4</sub>	<input type="checkbox"/>
NITROUS OXIDE	N <sub>2</sub> O	<input type="checkbox"/>

Apply

### Status

- ▶ IPCC 2006 Source/Sink Category: Energy (1) -> Fuel Combustion Activities (1.A)
- ▶ Fuel 2006: Coking Coal
- ▶ Gases: CO<sub>2</sub>
- ▶ Number of emission factors covered by your criteria: 46

<< Back to Find EF Start Page

Output table

Several search options available

Specify the IPCC category and gases. Click "Apply"

Status of search

Results can be exported to excel format



# IPCC EFDB and UNFCCC process

- In the context of the UNFCCC reporting guidelines for annual inventories for Annex I Parties

*If Annex I Parties lack country-specific information, they could also use EFs or other parameters provided in the IPCC Emission Factor Database, where available, provided that they can demonstrate that those parameters are appropriate in the specific national circumstances and are more accurate than the default data provided in the 2006 IPCC Guidelines (Decision 24/CP.19, para 12 Annex I)*

- In the context of National communications of non-Annex I Parties (NAI-NC)

*Consultative Group of Experts (CGE) agreed on the usefulness of the 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)*

# EFDB: Current Work

- Development of a new version of EFDB with multi-assignment of IPCC categories:
  - one single emission factor (parameter) can be defined within more than just one IPCC category
  - one single emission factor (parameter) can contain the reference to more than one gas
- Improvement of data entry and import functions
- Improvement of design, filter functions, the Unicode support for region-specific special characters

# Responsibility and Contribution

- The responsibility of appropriate use of the EFDB information will always remain with the users themselves

- Success of the EFDB depends on your contribution!

*If you work on development of GHG emission factors or would like to give a feedback on the content/functionality of EFDB, please share it with the Technical Support Unit (TSU) via e-mail:*

*[ipcc-efdb@iges.or.jp](mailto:ipcc-efdb@iges.or.jp)*

# Nomination of Experts for Editorial Board

## Nomination of experts to serve as Members of the Editorial Board of the IPCC Emission Factor Database

- 2 or 4 years term
- starting from 2018 or 2019

### IPCC Letter:

- To designated IPCC Focal Points and Ministries of Foreign Affairs (if no focal point has been designated)
  - ✓ Ref.: 5334-17/IPCC/TFI from October, 25, 2017
- To the Executive Heads of International and other Organizations
  - ✓ Ref.: 5335-17/IPCC/TFI from October, 25, 2017
- ❖ The deadline for nominations – **22 December 2017**





# Thank you

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

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# Next IPCC Side Event at COP-23

## Supporting the work of the IPCC

*An update on work in progress with an explanation of how people can work with the IPCC as lead authors, contributing authors and expert reviewers*

*Wednesday, 15 November 2017*

*18:30-20:00, Meeting Room 6*

