

UNFCCC reporting requirements and IPCC methodologies

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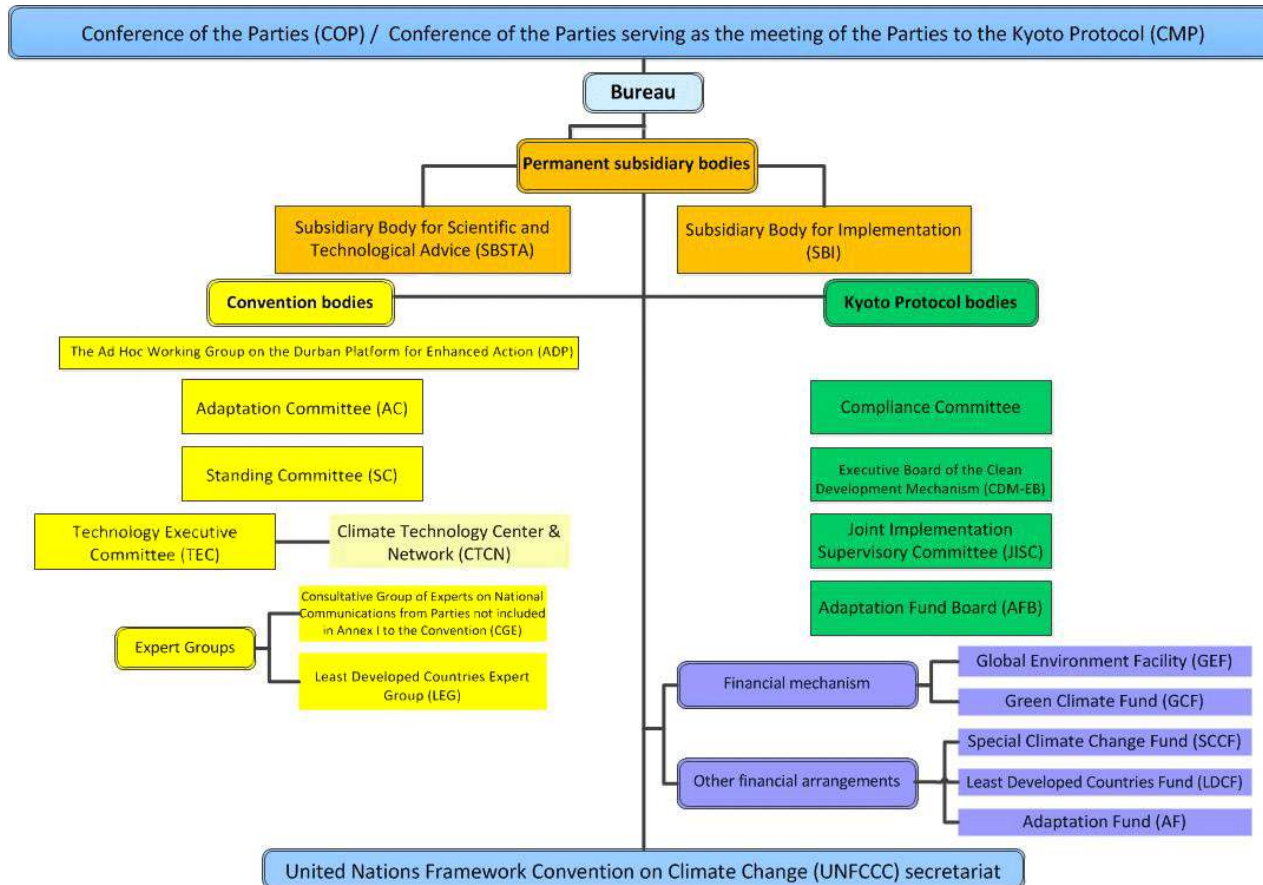




Outline

- UNFCCC and KP bodies
- Reporting requirements of Annex I Parties
- Reporting requirements of Non Annex I Parties
- IPCC Guidelines and Good Practice
- IPCC Emission Factor Data Base

UNFCCC and the KP (bodies)





Reporting obligations for Annex I Parties under the UNFCCC and the KP

Reporting and review requirements under the Convention encompass the following elements:

National communications which contain information on national greenhouse gas (GHG) emissions, climate-related policies and measures, GHG projections, vulnerability and adaptation to climate change, financial assistance and technology transfer to non-Annex I Parties, and actions on raising public awareness on climate change;

National GHG inventories which contain information on GHG emissions, such as activity data, emission factors and methodologies used to estimate these emissions (Included NIR and CRF tables).

Initial report

- GHG Inventory time-series
- Calculation of assigned amount under 3.7 & 8
- Calculation of commitment period reserve
- National registry
- National inventory system
- LULUCF definitions and elections

Annual reports

- GHG Inventory
- LULUCF information
- Assigned amount info
- 3.14 information
- Changes in national system
- Changes in national registry

True-up Period Report

- Final assigned amount information for commitment period
- Retired units
- Units for carry-over

National communications

- Convention elements
- National Inventory System
- National Registry
- Complementarity
- Article 2 policies and measures
- Legislative, enforcement and administrative arrangements
- Technology transfer, capacity building and other Article 10 activities
- Financial resources



Reporting obligations for Annex I Parties under the UNFCCC and the KP

Reporting for Annex I Parties under the Kyoto Protocol

As in the case of the Convention, the Kyoto Protocol imposes two regular, ongoing reporting requirements for Annex I Parties: an **annual report** and a **periodic national communication (4-5 years)**.

For the **annual report**:

National GHG inventory, as required by the Convention,
plus **supplementary information** on its implementation of the Kyoto Protocol.

This supplementary information covers:

- The Party's holdings of and transactions of Kyoto Protocol units
- Emissions and removals from LULUCF activities (Article 3.3, 3.4)
- Changes in the Party's national system and national registry
- Information on the Party's implementation of its commitment to address response measures.

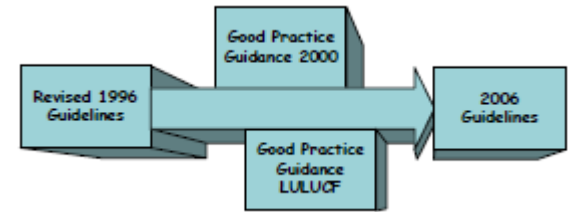


Current reporting obligations of the non-Annex I Parties

- Convention (Articles 4.1 and 12): all Parties must report on the steps they are taking or envisage undertaking to implement the Convention .
- In accordance with the principle of "common but differentiated responsibilities", the required contents of these national communications and the timetable for their submission is different for Annex I and non-Annex I Parties.
- Each non-Annex I Party shall submit its initial communication within three years of the entry into force of the Convention for that Party, or of the availability of financial resources
- Core elements of the non-Annex I National Communications:
 - **emissions and removals of greenhouse gases (GHGs)** – year 1990 or 1994 for the initial NC and year 2000 for the Second NC ;
 - details of the activities a Party has undertaken to implement the Convention
 - national circumstances
 - vulnerability assessment,
 - financial resources and transfer of technology, and
 - education, training and public awareness



IPCC GL



- Guidelines have evolved from 1996 to 2006
 - Have developed and improved as knowledge and experience increases
- Development of Good Practice Guidance (GPG) a major step forward
 - Complete, consistent, comparable, transparent, and accurate inventories taking account of available resources
 - Major change was from 1996 LUCF to GPG LULUCF
- 1996 Guidelines focus main processes, LULUCF & AFOLU focus on all land-uses.
- This increase in completeness and accuracy also increases data & resource needs.
- In contrast, changes from LULUCF to 2006 Guidelines (AFOLU) are small
- 2006 Guidelines [2.5 years work, 250 authors]
 - Have 4 sectors to reduce double counting or omissions and improve transparency and completeness
 - Have improved methods and default data
 - Cover more greenhouse gases and give methods for more sectors
 - Have integrated good practice guidance for clarity and ease of use
 - Require similar resources to implement as the 1996 Guidelines plus the two volumes of GPG
 - Does not pre-empt accounting choices - all the information needed is retained
 - The best globally applicable methods



IPCC GL — Methodological approach

Continued from 1996 Guidelines, through GPG 2000 & LULUCF to 2006 Guidelines:

Emission = [Emission Factor] x [Activity Data]

In General:

✓Energy emissions

Based on carbon content of fuel

✓Industrial Processes

Based on chemistry of process

Some use mass balance of product used

✓Land Use

Stock changes ⇒ Emissions/Removals

1. Inputs (e.g. growth) - outputs (e.g. decay, harvest)

2. Total Stock at end minus Total stock at beginning

✓Waste

Tracks carbon (fossil & biogenic) in waste



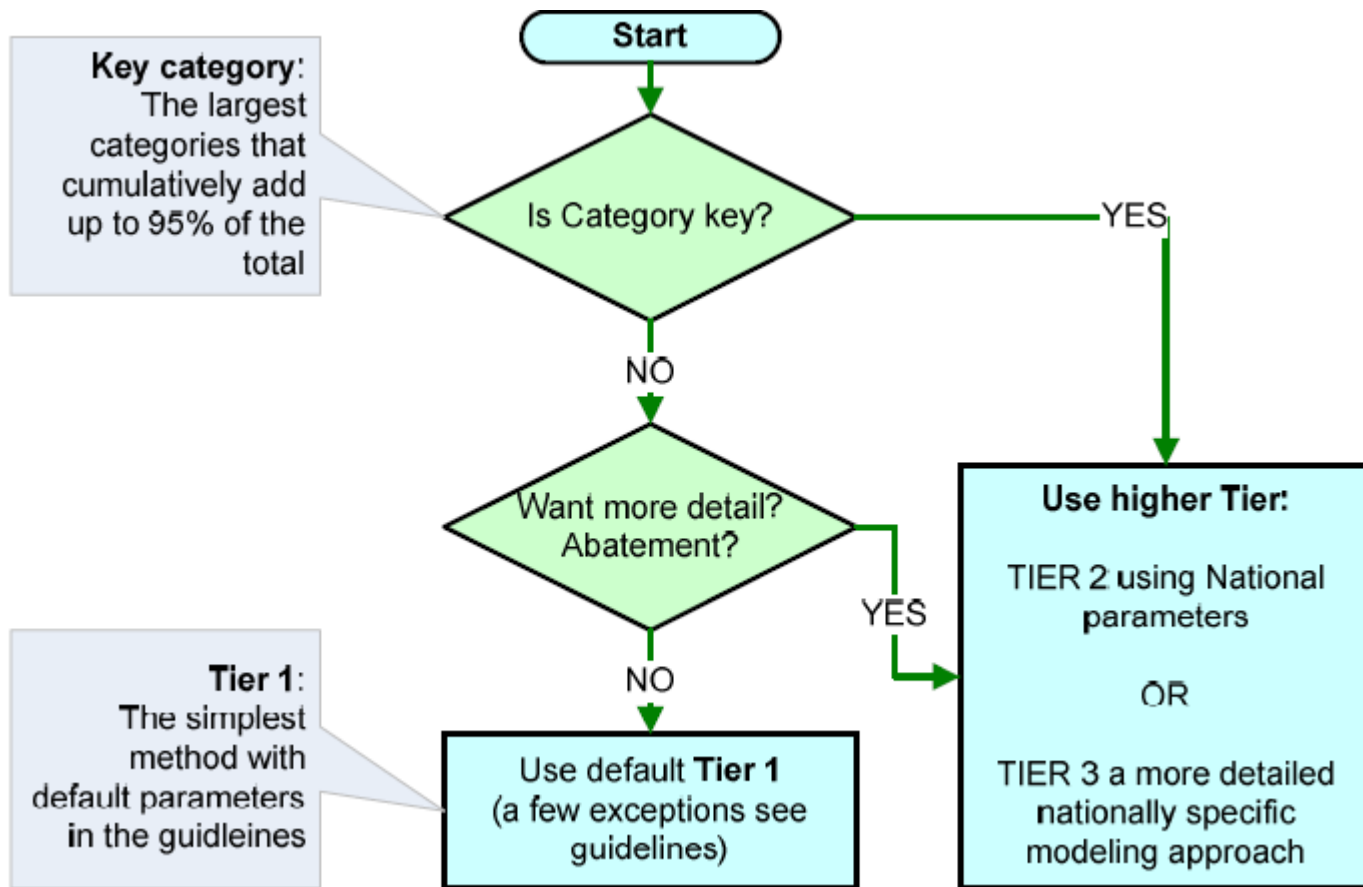
IPCC GL — GPG and Sectoral Guidance

Good Practice inventories are defined as “***those that contain neither over- nor under-estimates so far as can be judged, and in which uncertainties are reduced as far as is practical***”

GPG 2003 retains consistency with Revised 1996 Guidelines and is updated and expanded in the 2006 Guidelines

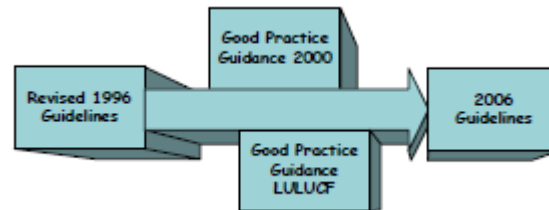


IPCC GL – Tiers and Key Categories



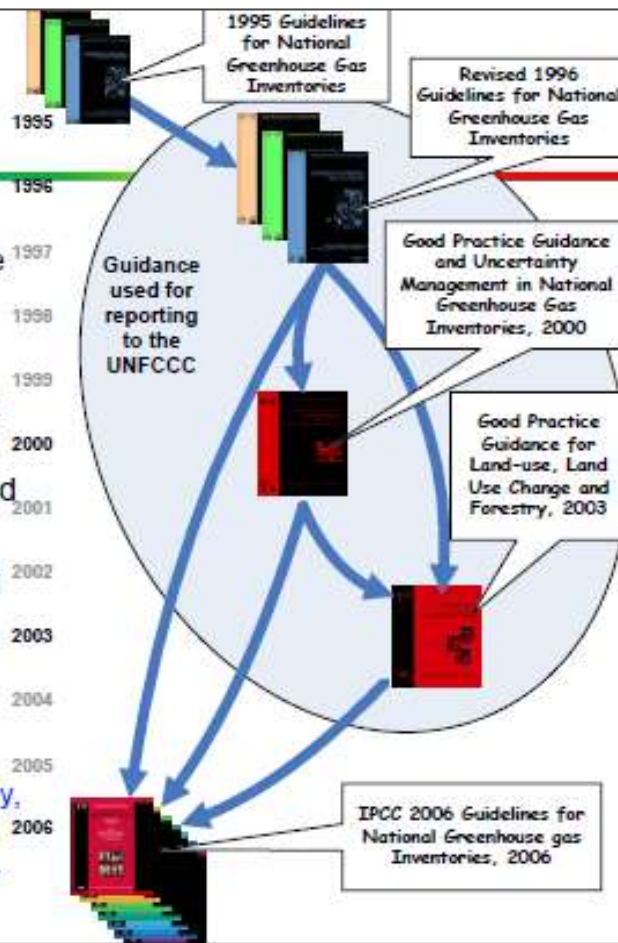


IPCC GL

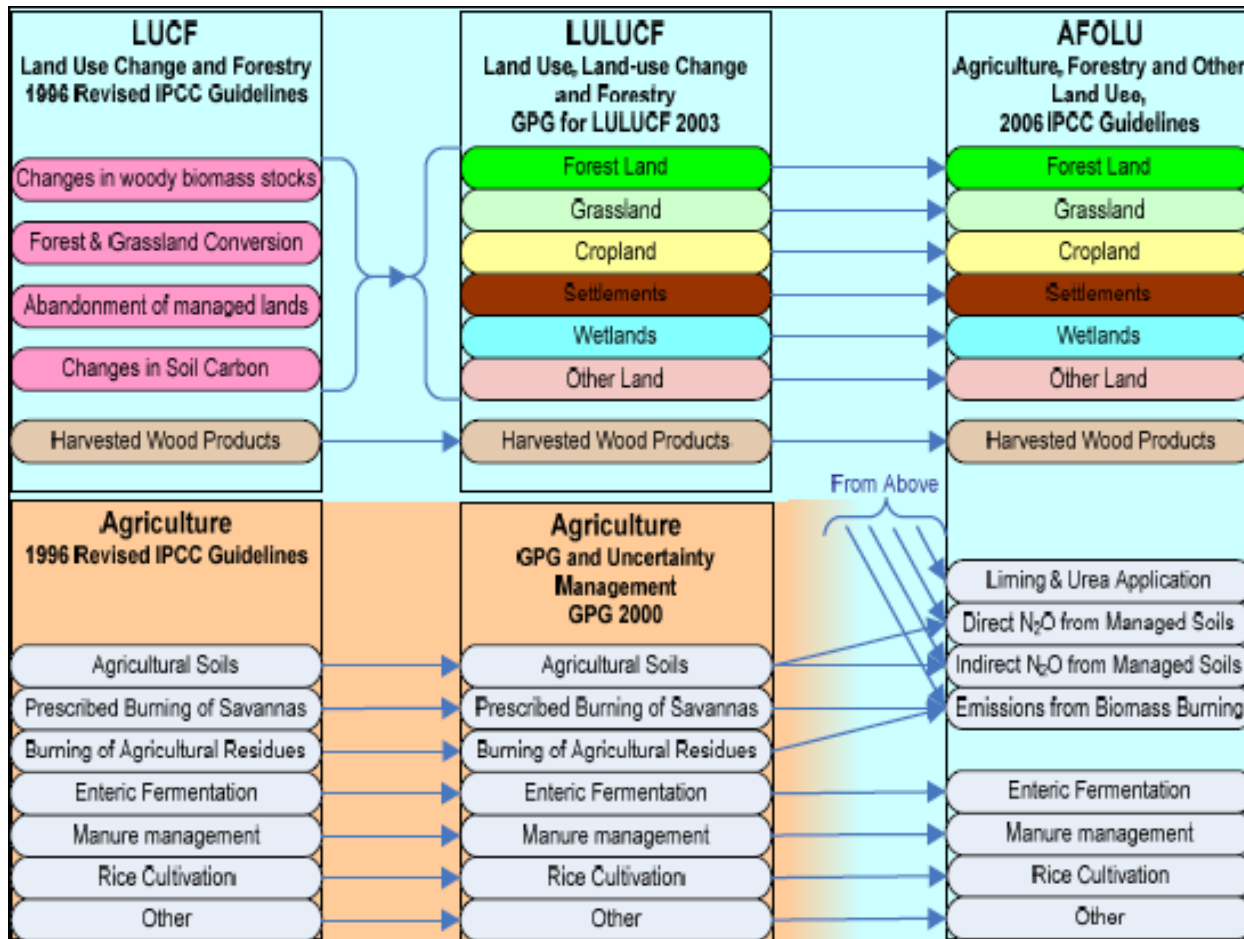


History

- Revised 1996 Guidelines
 - Land-Use Change and Forestry (LUCF) identifies major land use processes
- 2000 Good Practice Guidance and Uncertainty Management
 - Defines GPG for sectors except LUCF
- Good Practice Guidance for Land Use, Land-Use Change and Forestry (GPG LULUCF)
 - Expanded guidance covering all pools
 - Land-based not process-based
- 2006 IPCC Guidelines for National Greenhouse Gas Inventories
 - Now only 4 main sectors: Energy, IPPU (Industrial Processes and Product Use), AFOLU (Agriculture, Forestry and Other Land Use) and Waste



IPCC GL - Categories





IPCC GL - 2006

Improvements in AFOLU Guidance

Wetlands

- 2006 GL has complete coverage of peatlands
- 2006 GL improved coverage of flooded lands but some guidance is incomplete and awaits further scientific investigation

Fires

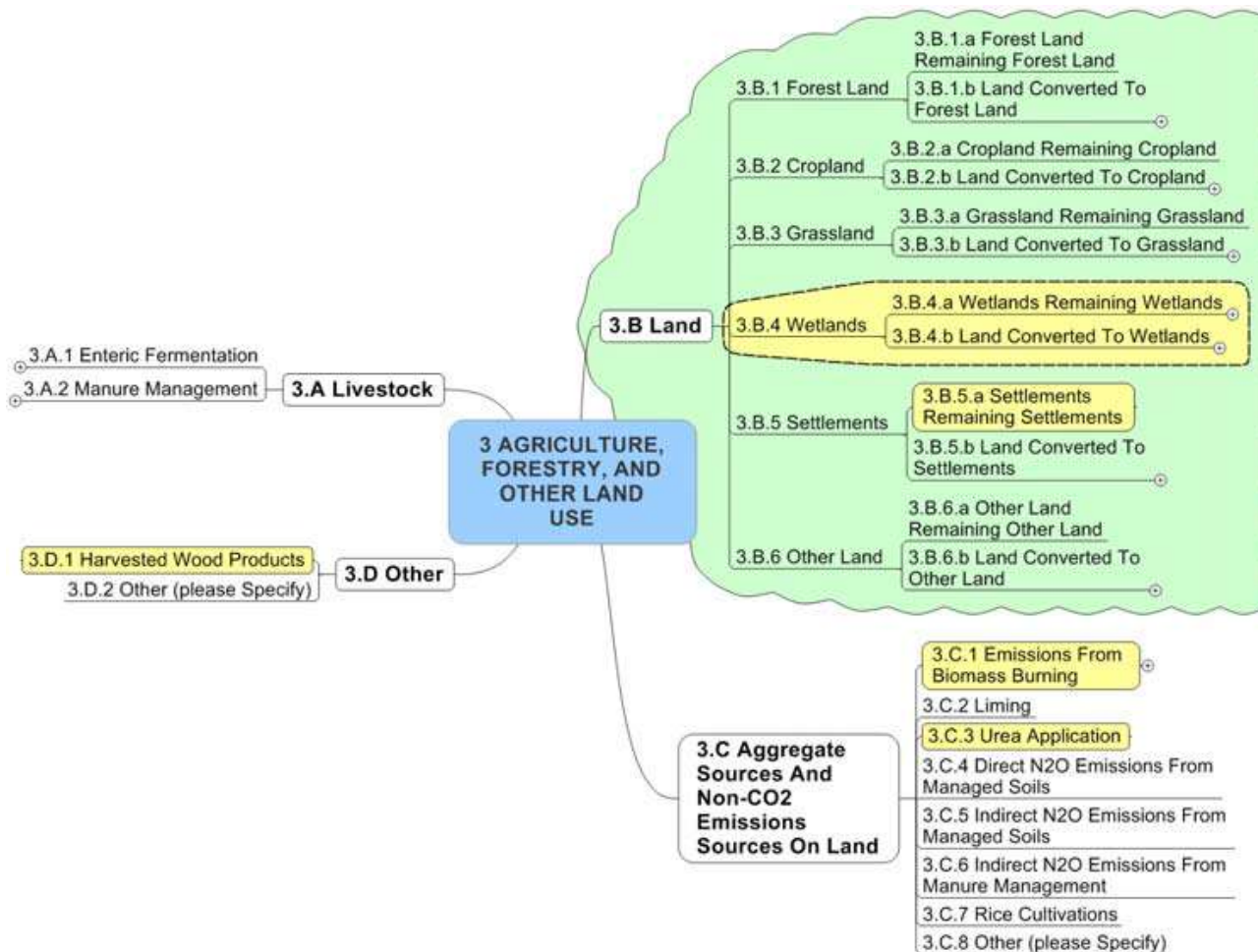
- Guidelines have increased consistency and coverage of fires
- All emissions from fires reported in a separate category for increased transparency

Managed land is used in these guidelines as a proxy for identifying anthropogenic emissions by sources and removals by sinks.

- use of managed land as a proxy for anthropogenic effects was introduced in the *GPG-LULUCF* and is consistent with the Revised 1996 Guidelines.
- Managed land is land where human interventions and practices have been applied to perform production, ecological or social functions

IPCC GL - 2006

AFOLU Sector Structure





IPCC GL

The same basic methodological approaches are used from 1996 Guidelines, through GPG 2000 & GPG LULUCF to 2006 Guidelines.

The 2006 Guidelines maintain the methods of earlier guidelines and integrate GPG

- ✓ Improved guidance in some areas, more and improved default data
- ✓ Wider coverage of gases in some sectors
- ✓ Additional sources covered
- ✓ All estimates are now of actual annual emissions (“potential” emissions not needed)
- ✓ Categories simplified and clarified in some areas
- ✓ Do not pre-empt accounting choices - all the information needed is retained



IPCC - EFDB

Need for Emission Factor Database (EFDB)

IPCC Guidelines contain global or regional default values (mostly for Tier 1) based on the best science when guidelines were compiled.

Higher tier estimates need country-specific factors based on:

- Situation in country, methods, management etc
- Latest science and best practice elsewhere
- Latest mitigation being applied

However:

- It is expensive to measure all these. It would be more efficient to use appropriate literature or experience in similar situations.
- Emission factors and other parameters may not be easily accessible.



IPCC - EFDB

EFDB – Dynamically evolving library:

- ✓ **Documented Emission Factors (interpreted broadly – all parameters)**

 - Peer reviewed

 - Non-peer reviewed (government reports, industry studies etc.)

 - In any language (need English abstract)

- ✓ **Available through internet as well as in the form of CDROM**

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

- ✓ **Information about when and where this data may be applicable**

- ✓ **Evolves dynamically - new data from inventory compilers, researchers,...**

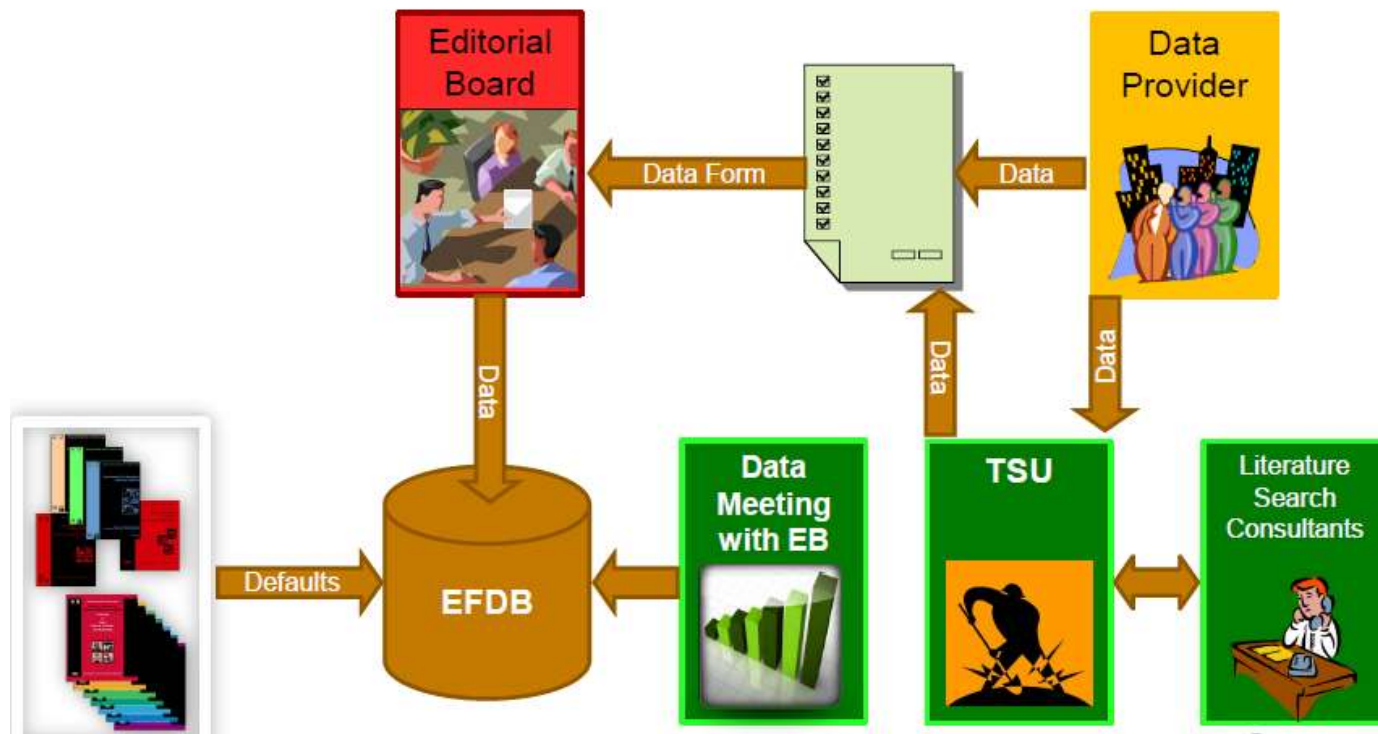
- ✓ **Communication platform for distribution of new research and measurement data**

- ✓ **Data evaluated by Editorial Board (EB)**

However the user **MUST** decide if this is suitable in their specific situation

IPCC - EFDB

Populating EFDB



Thank you

