Need for Emission Factor Database (EFDB)

- IPCC Guidelines contain global or regional default values (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 so use appropriate literature or experience in similar situations
  - Emission factors and other parameters may not be easily accessible
EFDB

• A library:
  ◦ Documented Emission Factors (interpreted broadly – all parameters)
    ▪ Peer reviewed
    ▪ Non-peer reviewed (government reports, industry studies etc.)
    ▪ In any language (need English abstract)
  ◦ Information about when and where this data may be applicable
  ◦ Evolves dynamically - new data from inventory compilers, researchers, industry...
  ◦ Communication platform for distribution new research and measurement data
  ◦ Data evaluated by Editorial Board (EB)

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

Including of New Data

➢ New data are evaluated by the Editorial Board (EB). They should be:
  ➢ 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.
Populating EFDB

Editorial Board → Data Form → Data Provider

Data Meeting with EB → TSU

Literature Search Consultants

New Data Accepted by EB

- FAO
- Data Meeting
- Literature Search
- NIR Search
- Submissions

2003 2004 2005 2006 2007 2008 2009

- 50
- 100
- 200
- 300
- 400
New Data

- Energy: 17%
- Waste: 4%
- LUCF: 60%
- Agriculture: 18%
- Industrial Processes: 1%

EFDB Usage

- Unique visitors
- Data Downloaded

Graph showing data usage and unique visitors from 2005 to 2010.
Web Application

<table>
<thead>
<tr>
<th>Gas:</th>
<th>METHANE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPCC 1996 Source/Sink Category:</td>
<td>Agriculture (4)</td>
</tr>
<tr>
<td>IPCC 2006 Source/Sink Category:</td>
<td>Agriculture, Forestry, and Other Land Use (3)</td>
</tr>
</tbody>
</table>

Properties:
- Parameters/Conditions:
  - Region/Regional Conditions: Climate, Warm, Country: Developing Countries
  - Abatement/Cover Technologies: Others
- Description: Manure Management Engine
- Value: 22 kg/ha/day
- Emission Source:
- IPCC Worksheet:
  - IPCC Guidelines for National Greenhouse Gas Inventories (Table 4-5 on Page 4-12 of Reference Manual)
- Technical Notes:
- Reference:
  - English
- Data Represented as:
  - 95% of GDP
- Data Quality:
  - Upper: 20% Lower: -20%
  - IPCC default

CD Rom

- Operates stand-alone on a PC, where internet connection slow or difficult
- Produced periodically – not up-to-date
- Distributed free by TSU

http://www.ipcc-ncgia.iges.or.jp/EFDB/
Improvements

- TFI is becoming more pro-active in collecting new data
  - EFDB is open to any relevant data proposals.
  - If you have your own data on emission factors, please contact the Technical Support Unit (TSU) by e-mail <ipcc-efdb@iges.or.jp>.
- We are reviewing the database
  - Some internal improvements underway
  - Will improve interface: Users’ feedback will be quite important
- Your participation is highly appreciated!!

Task Force on National Greenhouse Gas Inventories

Thank you