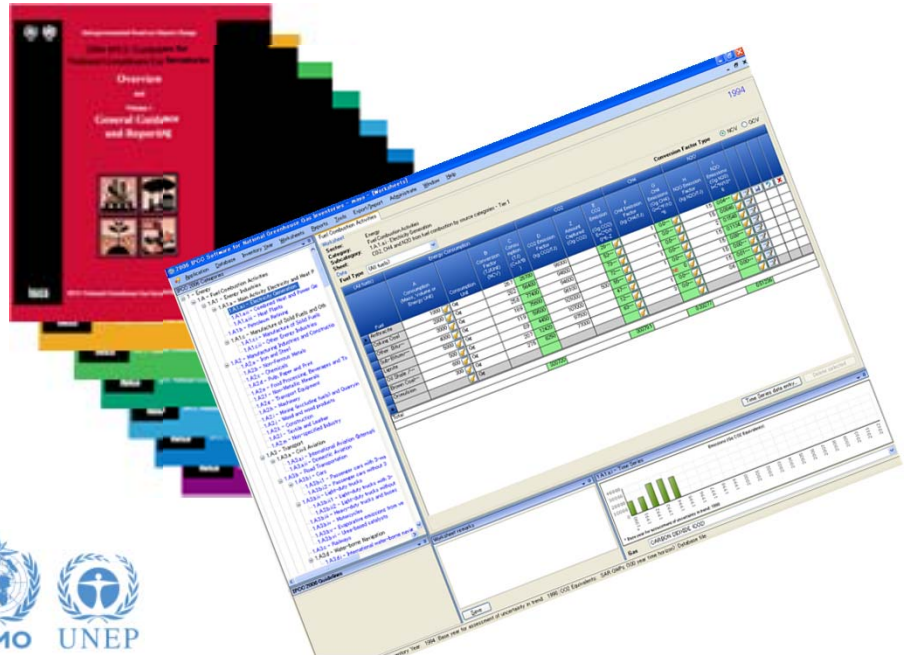
Task Force on National Greenhouse Gas Inventories

IPCC Inventory Software



Maya Fukuda

Side-Event, SB 38, Bonn, 8 June 2013

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Introduction

- The IPCC has launched its *IPCC Inventory Software* in May 2012
- The Software implements the 2006 IPCC Guidelines for National Greenhouse Gas Inventories
- However it can also be used for reporting under the 1996 Guidelines
  - This allows countries to utilise the improvements in the methodologies and default values since 1996

IPCC Guidelines

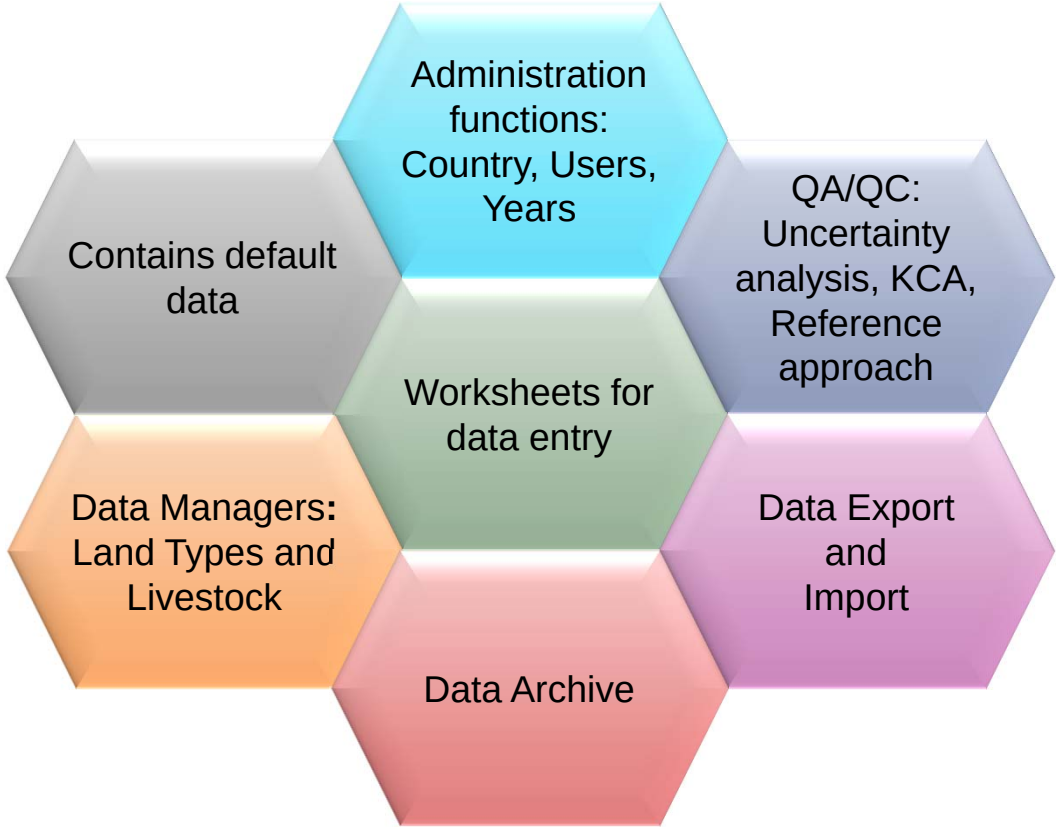
- IPCC Guidelines consist of:
  1. Methods
  2. Default data
  3. Good Practice Guidance
  4. Reporting Instructions
- 1,2 & 3 can be used whatever reporting is agreed on
  - IPCC or otherwise
- Thus the methods and data in the 2006 Guidelines can be used however emissions and removals are reported
  - 1996 Guidelines, GPG or 2006 Guidelines

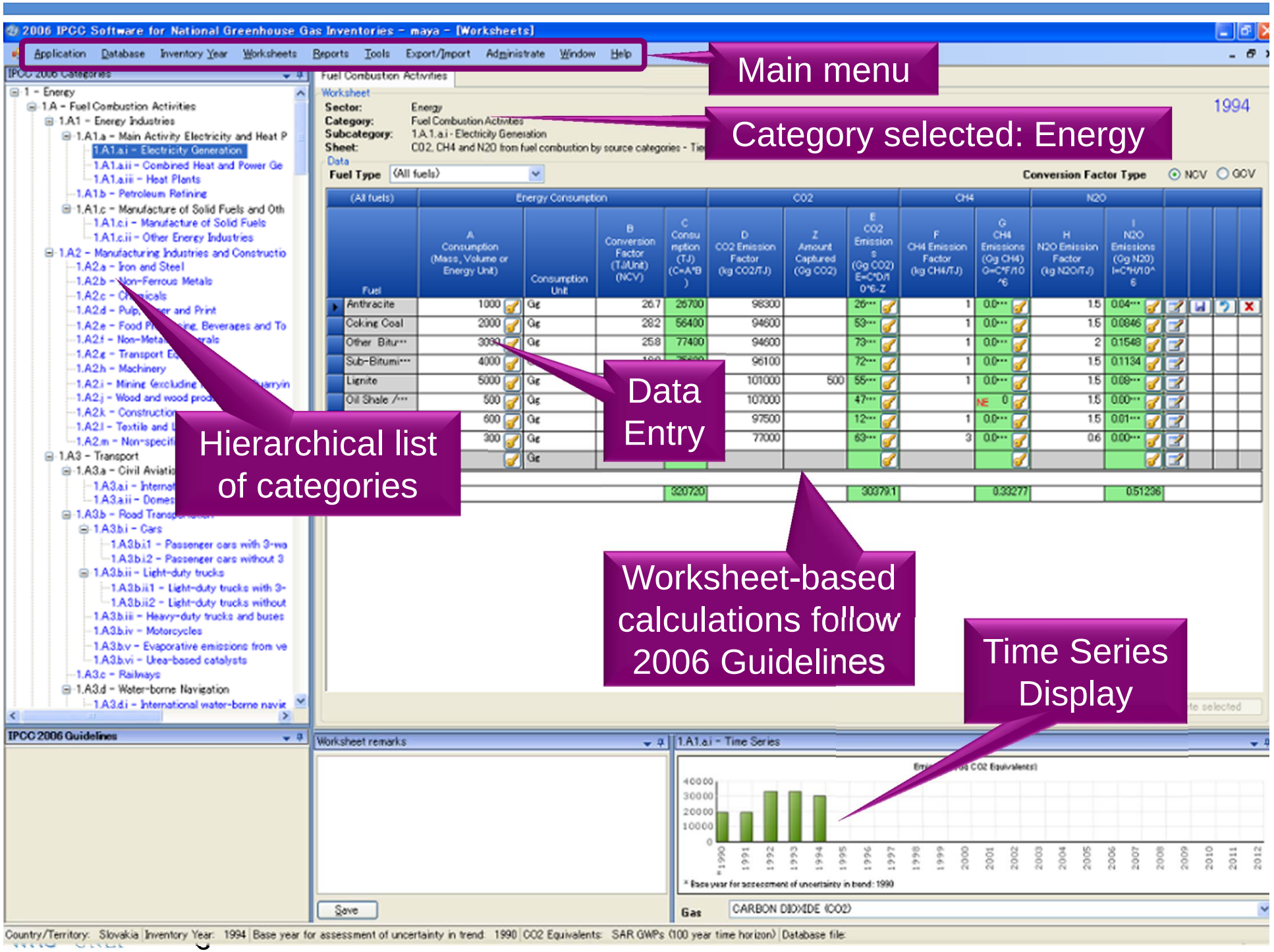
IPCC Inventory Software

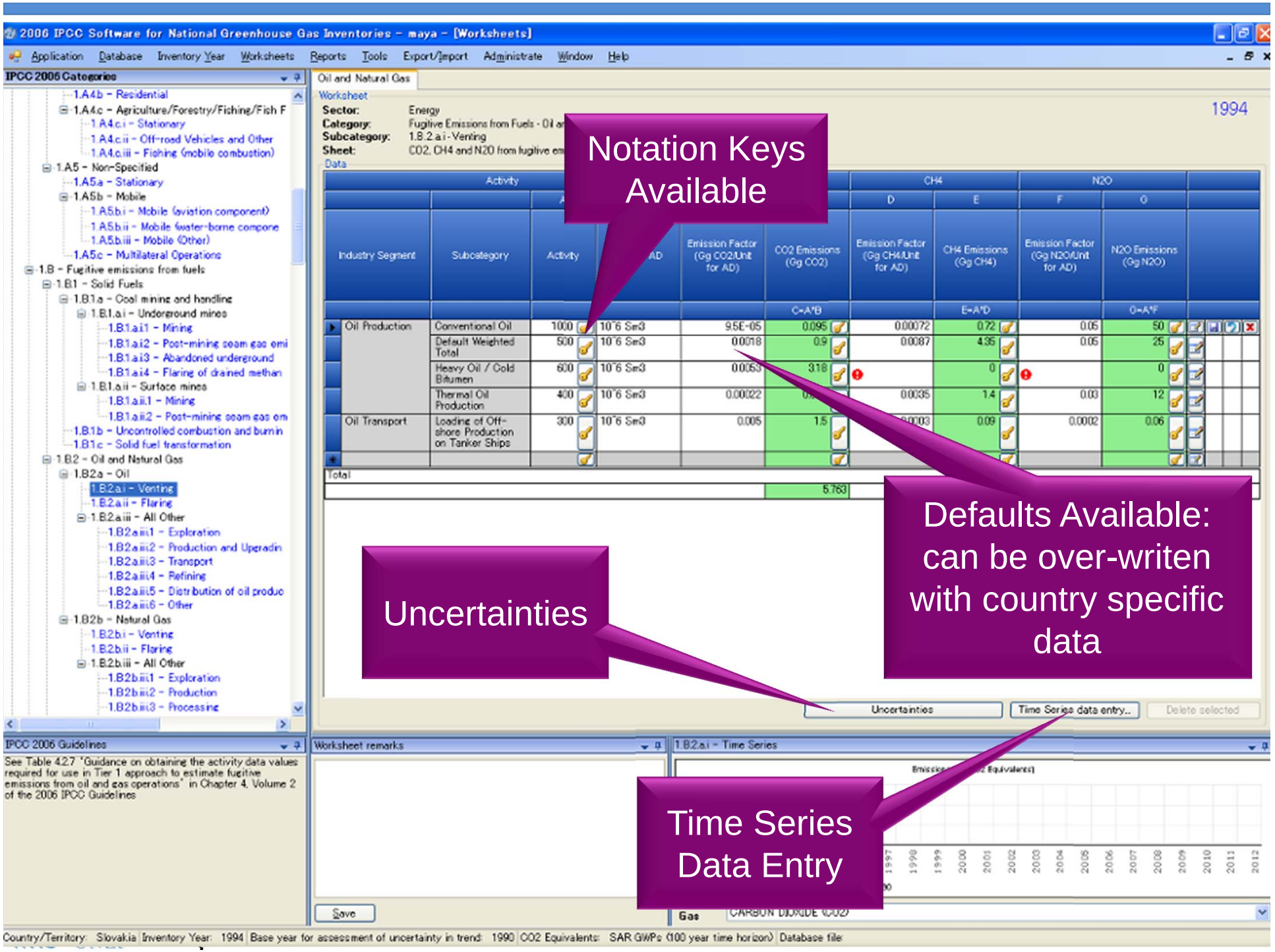
- Inventory Software that can assist in using the IPCC Guidelines
  - ❖ Stand alone software with modest hardware requirements
  - ❖ It is database based
  - ❖ It can be used for the whole inventory or just individual categories
  - ❖ Will output in non-Annex 1 National Communications format
  - ❖ FREE!

  - ❖ The latest version is Ver.2.11 (released in April 2013)
    -> Download from http://www.ipcc-nggip.iges.or.jp/software/index.html
  - ❖ A newer software is backwards compatible with Ver. 2.00

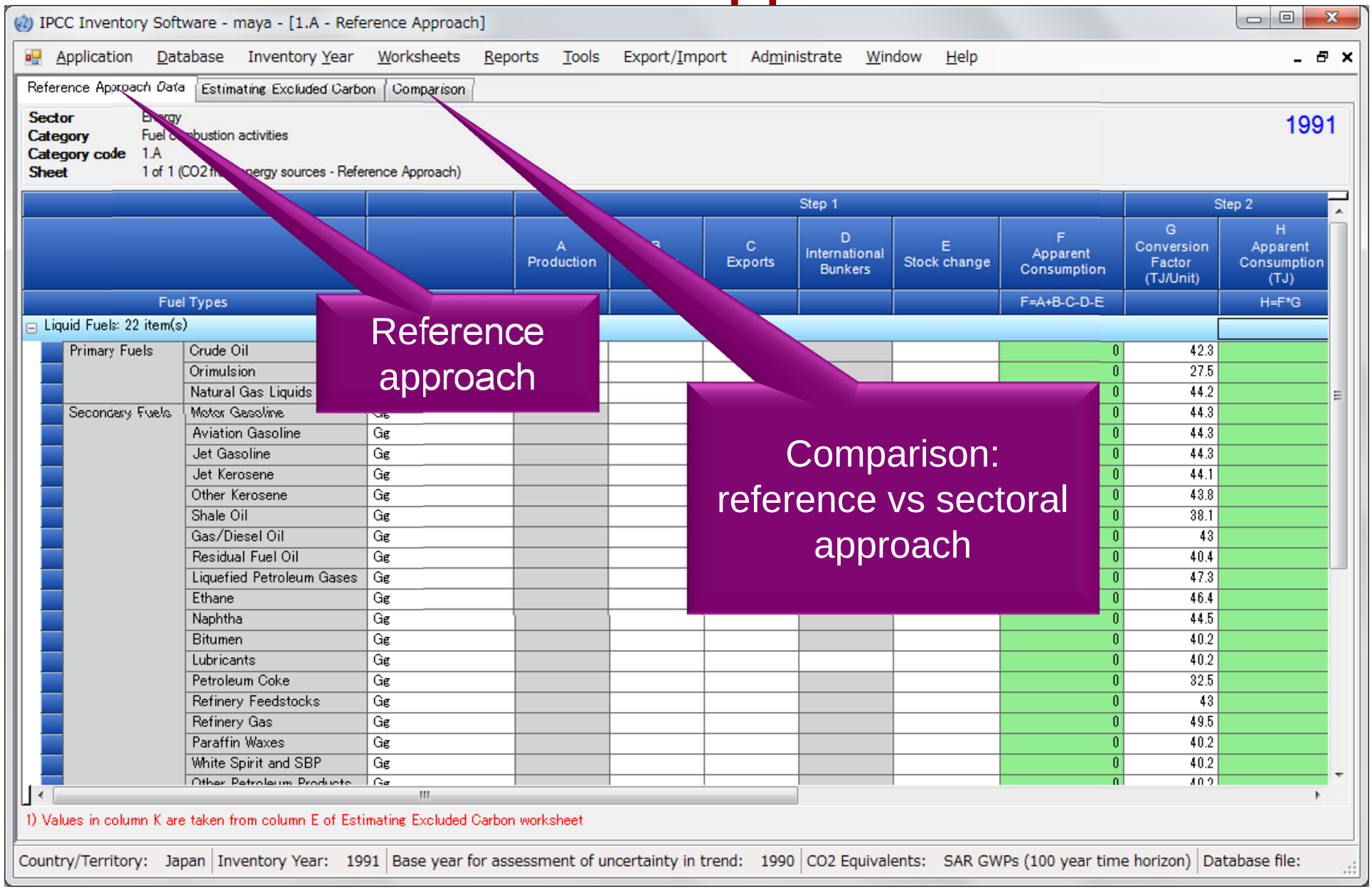
Software Functions



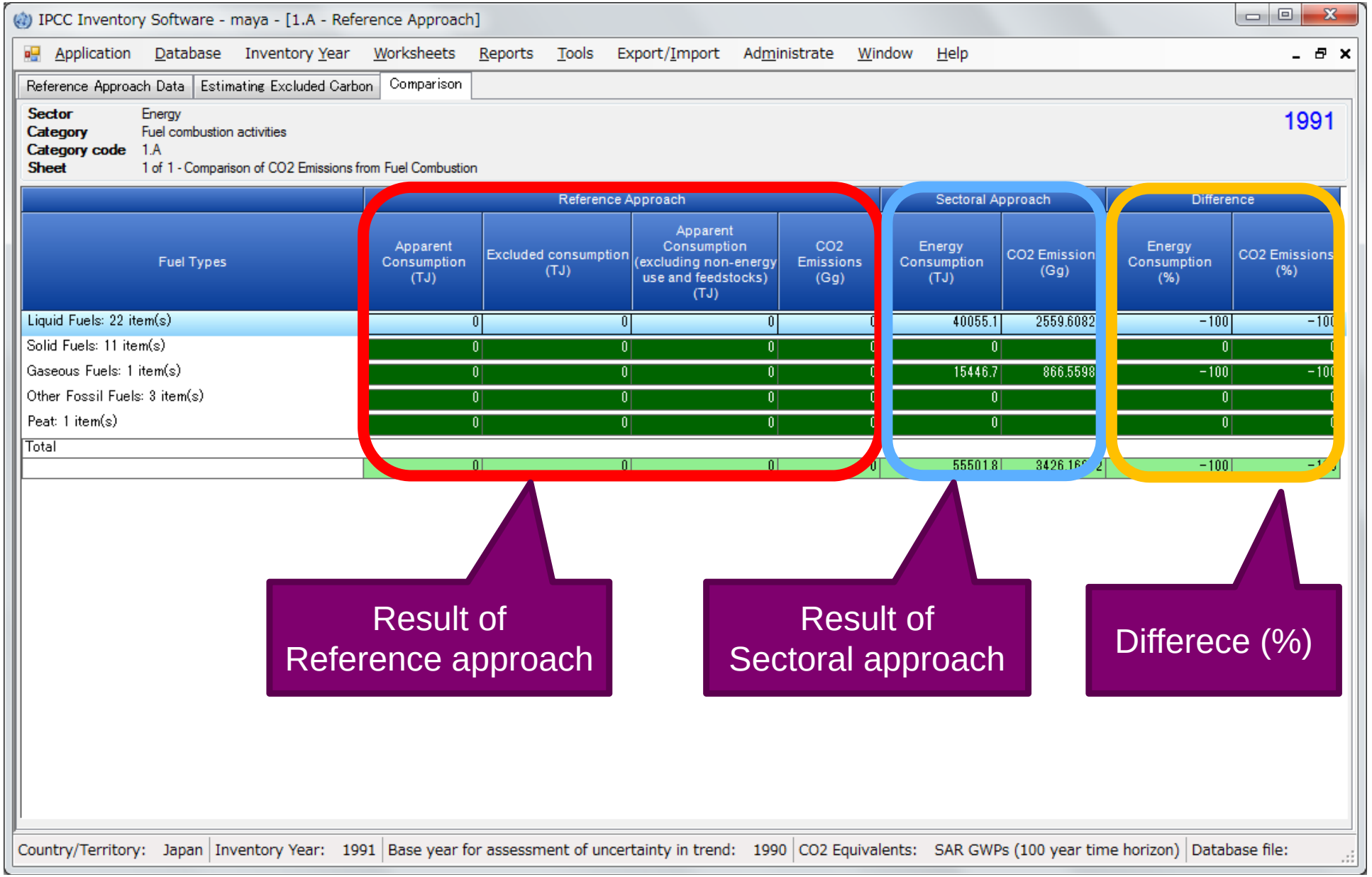

2006 IPCC Software for National Greenhouse Gas Inventories – maya – [Worksheets]
Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help
Main menu
Category selected: Energy
Hierarchical list of categories
Data Entry
Worksheet-based calculations follow 2006 Guidelines
Time Series Display
1994
Sector: Energy
Category: Fuel Combustion Activities
Subcategory: 1.A.1.a.i - Electricity Generation
Fuel Type (All fuels)
Conversion Factor Type NCV GCV
Worksheet remarks
1.A.1.a.i - Time Series
Save
Gas CARBON DIOXIDE (CO2)
Country/Territory: Slovakia | Inventory Year: 1994 | Base year for assessment of uncertainty in trend: 1990 | CO2 Equivalents: SAR GWPs (100 year time horizon) | Database file:


2006 IPCC Software for National Greenhouse Gas Inventories - maya - [Worksheets]
Application Database Inventory Year Worksheets Reports Tools Export/Import Administrate Window Help
IPCC 2006 Categories
1.A4b - Residential
1.A4c - Agriculture/Forestry/Fishing/Fish F
1.A4c.i - Stationary
1.A4c.ii - Off-road Vehicles and Other
1.A4c.iii - Fishing (mobile combustion)
1.A5 - Non-Specified
1.A5a - Stationary
1.A5b - Mobile
1.A5b.i - Mobile (aviation component)
1.A5b.ii - Mobile (water-borne compone
1.A5b.iii - Mobile (Other)
1.A5c - Multilateral Operations
1.B - Fugitive emissions from fuels
1.B.1 - Solid Fuels
1.B.1.a - Coal mining and handling
1.B.1.a.i - Underground mines
1.B.1.a.i1 - Mining
1.B.1.a.i2 - Post-mining seam gas emi
1.B.1.a.i3 - Abandoned underground
1.B.1.a.i4 - Flaring of drained methan
1.B.1.a.ii - Surface mines
1.B.1.a.ii1 - Mining
1.B.1.a.ii2 - Post-mining seam gas em
1.B.1b - Uncontrolled combustion and burnin
1.B.1c - Solid fuel transformation
1.B.2 - Oil and Natural Gas
1.B.2.a - Oil
1.B.2.a.i - Venting
1.B.2.a.ii - Flaring
1.B.2.a.iii - All Other
1.B.2.a.iii1 - Exploration
1.B.2.a.iii2 - Production and Upgradin
1.B.2.a.iii3 - Transport
1.B.2.a.iii4 - Refining
1.B.2.a.iii5 - Distribution of oil produc
1.B.2.a.iii6 - Other
1.B.2.b - Natural Gas
1.B.2.b.i - Venting
1.B.2.b.ii - Flaring
1.B.2.b.iii - All Other
1.B.2.b.iii1 - Exploration
1.B.2.b.iii2 - Production
1.B.2.b.iii3 - Processing
Oil and Natural Gas
Worksheet
Sector: Energy
Category: Fugitive Emissions from Fuels - Oil a
Subcategory: 1.B.2.a.i - Venting
Sheet: CO2, CH4 and N2O from fugitive em
1994
Data
Activity
CH4
N2O
Industry Segment
Subcategory
Activity
AD
Emission Factor (Gg CO2/Unit for AD)
CO2 Emissions (Gg CO2)
Emission Factor (Gg CH4/Unit for AD)
CH4 Emissions (Gg CH4)
Emission Factor (Gg N2O/Unit for AD)
N2O Emissions (Gg N2O)
C=A*B
E=A*D
G=A*F
Oil Production
Conventional Oil
1000
10^6 Sm3
9.5E-05
0.095
0.00072
0.72
0.05
50
Default Weighted Total
500
10^6 Sm3
0.0018
0.9
0.0087
4.35
0.05
25
Heavy Oil / Cold Bitumen
600
10^6 Sm3
0.0053
3.18
0
0
Thermal Oil Production
400
10^6 Sm3
0.00022
0.0035
1.4
0.03
12
Oil Transport
Loading of Off-shore Production on Tanker Ships
300
10^6 Sm3
0.005
1.5
0.09
0.0002
0.06
Total
5.763
Notation Keys Available
Defaults Available: can be over-writen with country specific data
Uncertainties
Time Series Data Entry
Uncertainties
Time Series data entry..
Delete selected
IPCC 2006 Guidelines
See Table 4.2.7 'Guidance on obtaining the activity data values required for use in Tier 1 approach to estimate fugitive emissions from oil and gas operations' in Chapter 4, Volume 2 of the 2006 IPCC Guidelines
Worksheet remarks
Save
1.B.2.a.i - Time Series
Gas
CARBON DIOXIDE (CO2)
Country/Territory: Slovakia
Inventory Year: 1994
Base year for assessment of uncertainty in trend: 1990
CO2 Equivalents: SAR GWPs (100 year time horizon)
Database file:

Tool – Reference approach



Tool – Reference approach

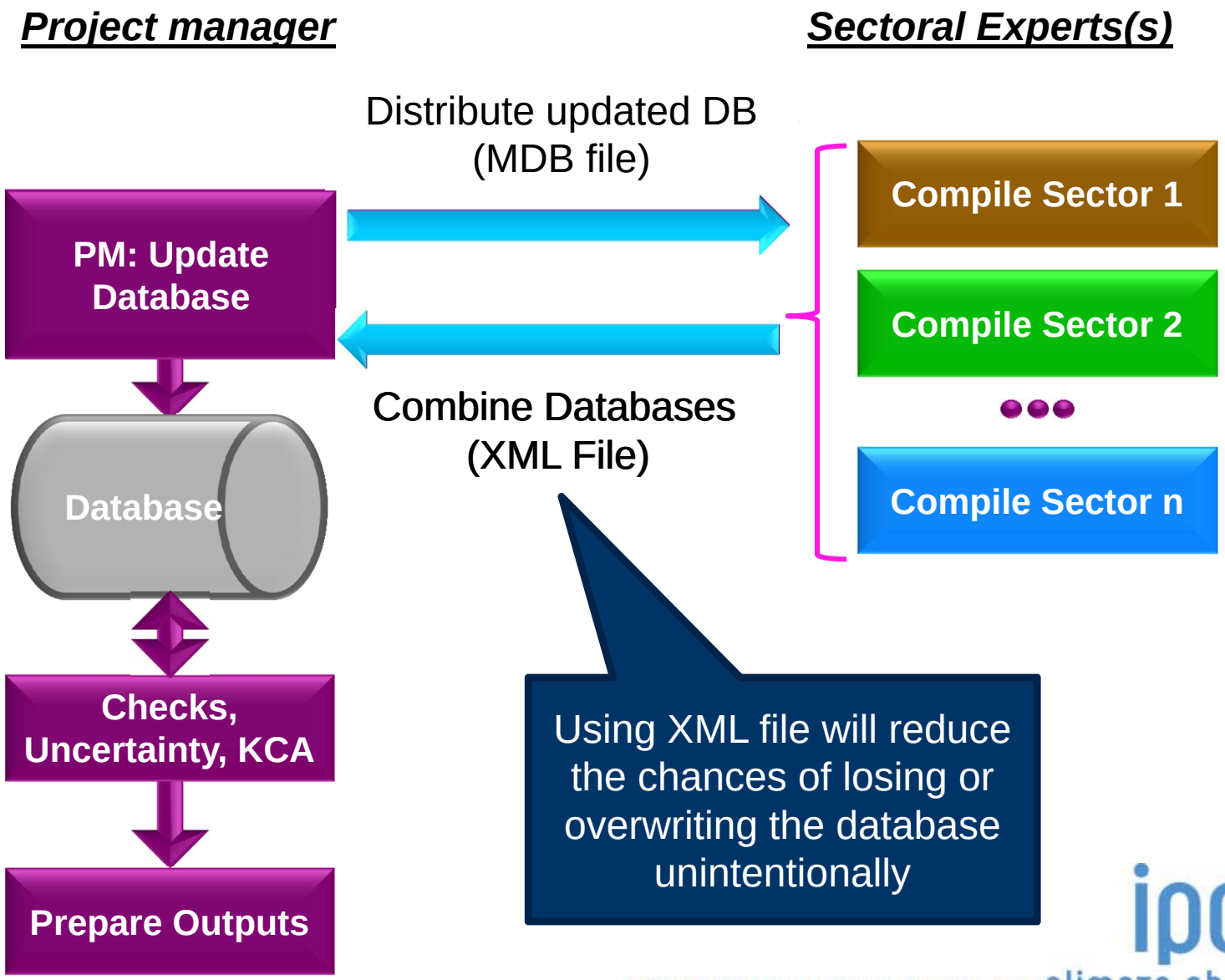


Reports

Report	Level	Contents
Summary	1.A.1	Emissions
Short summary	1.A	Emissions
Sectoral	1.A.1.a.ii (Most disaggregated level)	Emissions
Background	1.A.1.a.ii (Most disaggregated level)	Activity data Emissions

Note: All report can be exported as MS Excel file.

Multiple Users



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Support

- The TSU is supporting the software:
  - ❖ Help Desk: email ipcc-software@iges.or.jp
  - ❖ Web Forum: https://discussions.zoho.com/ipccinventorysoftware/
- TSU is preparing User Guide including dummy data
- TSU will maintain software and is planning to add functions to the software:
  - ❖ Complete Tier 2 coverage
  - ❖ More output formats

Task Force on National Greenhouse Gas Inventories

Thank you

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