# Outcome of the IPCC expert meeting on National Forest Greenhouse Gas Inventories and Next Steps

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# IPCC Guidelines for GHG emission inventories

- IPCC Guidelines give globally applicable methods and default parameters for estimates from nearly all sources while providing a framework for the consistent use of more detailed, accurate, country specific methods
- Guidelines have evolved from 1991 to 2006
- Revised 1996 Guidelines basis of reporting to UNFCCC
  - Supplemented by GPG
- Major step was the Good Practice Guidance (GPG)
  - 2000 – All sectors except Land Use (GPG 2000)
  - 2003 – Land Use and Land Use Change (GPG LULUCF)
  - Major methodological change was from 1996 LUCF to GPG LULUCF
- 2006 Guidelines [2.5 years work, 250 authors]
  - 4 sectors (Energy, IPPU, AFOLU & Waste)
  - Require similar resources to implement as the 1996 Guidelines plus the two volumes of GPG
  - The best globally applicable methods

# IPCC Guidelines & Forests

- Revised 1996 Guidelines – activity based
  - changes in forest and other woody biomass stocks
  - forest and grassland conversion
  - abandonment of … plantation forests, or other managed lands
  - changes in soil carbon
  - HWP – default HWP pool constant
- GPG LULUCF – land based
  - Lands remaining Forest Lands & Lands converted to Forest Lands
  - 5 Pools for complete coverage
    - Living(above and below ground)
    - Dead Organic Matter (dead wood & litter)
    - Soil Organic Carbon
- 2006 Guidelines
  - As GPG LULUCF with improved emission factors & parameters
  - Includes more detailed methods for HWP without decision on accounting

# Subsequent Expert Meetings

- Managed Land Sao Paulo (2009)
  - Currently no general alternative to the use of "managed land" as a proxy for identifying anthropogenic emissions - Possible alternatives need further scientific development and subsequent assessment
- Use of FAO Data Rome (2010)
  - Produced guide to Use of FAO data in LULUCF/AFOLU
- Uncertainties & Validation Utrecht (2010)
  - Developed Q&A on uncertainty analysis for web site
- "Extra Detail" Sydney (August 2010)
  - Will look at use of "Tier 3" models and source measurements, how these can be integrated into inventories, and their validation, verification, reporting and documentation

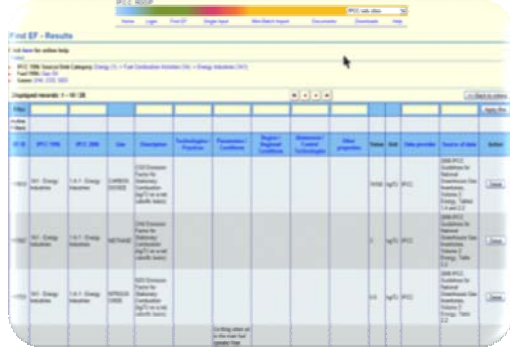
# National Forest GHG Inventories: A Stock Taking - Yokohama (2010)

- Identified areas where additional guidance may be useful:
  - Design of forest monitoring systems
    - inventory design, stratification (particularly in dynamic landscapes) , sampling, pools and accuracy/uncertainty assessment;
  - Combination of ground based inventories with remote sensing and modeling approaches;
  - Use of remote sensing data in forest GHG inventories
    - stratification, change assessment and use of remote sensing methods for biomass estimation;
  - Guidance on selectively logged forests.
  - Data on emission factors and parameters have improved since the 2006 Guidelines were finalised (EFDB)
    - e.g. Biomass (Conversion and) Expansion Factors (BEF/BCEF), and emission factors for peat lands.

# National Forest GHG Inventories: A Stock Taking - Yokohama (2010)

- Need for more assistance:
  - Use of GPG – decision trees and flow charts
  - Uncertainty Estimation
  - Use of “Tier 3” models
- Need to ensure latest information is available
  - “Technical Bulletins”?
  - EFDB
  - Discussion Forum
  - FAQ
- Peatlands

# EFDB – Emission Factor Database



- A library of up-to-date emission factors and other parameters
  - Either new data or appropriate for national or regional conditions
  - For both 1996, GPG or 2006 Guidelines
- Data is checked by Editorial Board to be:
  - Robust, Applicable & Documented
  - Users select appropriate data for their national circumstances
- Improvements
  - Data meetings focusing on a specific topic/area
  - Additional resources from TSU to support the Editorial Board and develop EFDB
  - Review of interface to make it easier to use for forest and other land use data

# Software - 2006 Guidelines

- Software being developed
  - Initial version planned for end 2010
  - Review version available on our web site
- Earlier software for 1996 Guidelines now maintained by UNFCCC

# Other assistance on inventories

- Primer
- Brochures
- FAQ
- Website with all documents and additional presentations
- TSU will try to answer questions on guidelines – or refer them to experts
- TSU can sometimes provide experts for training courses
- TFI is ready to respond to specific requests form UNFCCCC

# Summary

- ✓ Identified areas for additional guidance
  - ✓ Inventory Design, stratification
  - ✓ Use of remote sensing
  - ✓ Guidance on selectively logged forests
  - ✓ New data and emission factors
- ✓ Support to users. Both 1996 and 2006 Guidelines
  - ✓ Expert meetings and meeting reports
  - ✓ EFDB
  - ✓ Software
  - ✓ FAQ etc
- ✓ Training we can provide material and trainers
- ✓ IPCC will respond to requests from UNFCCC

# Thank you

Guidelines in all UN languages can be downloaded from:

**http://www.ipcc-nggip.iges.or.jp**

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