

## **Experiences and notes from** developing a Reference Level

Rob Waterworth







#### Australia's circumstances

- Large area of highly variable forest (108M ha)
  - Only a small proportion under intensive management
- Numerous types of forest and forest management
  - Native forests, plantations
    - > Single tree selection to clearfell, enrichment, other management
  - Long history of management
    - > Forests in various states of regrowth-mature, differing silviculture
- Existing wall-to-wall remote sensing program within an integrated MRV system
- Legislation dealing with greenhouse gas emissions being implemented







## Reference level development did not start with technical discussion

- What were the Governments' requirements?
  - International reporting
  - National policy requirements
- What were the key factors in forest management?
  - Types of activities under forest management
  - Nature of the forest estate
  - Natural disturbances vs anthropogenic emissions
- What did the decision text state?
  - Requirements, report structure, accounting rules and modalities, key documents, review procedures







# Reference level had to meet national policy requirements

- Clean Energy Futures (CEF) package
  - Range of measures to reduce emissions, including an emission trading system
    - ➤ Includes use of land sector mitigation options through the Carbon Farming Initiative
  - Legislation passed last Tuesday
    - Will start July 1 2011
- Potential changes in forest policy
  - Effects on harvesting rates
  - Private land holder responses









## Key criteria for reference level

- Cover all key forest management activities
  - Ensure balanced accounting
- Consistent spatially, temporally and with MRV system
- Flexibility to allow use of project based, policy, market or other mechanisms
- Include all carbon pools (inc. wood products) and gases (CO<sub>2</sub> and non-CO<sub>2</sub>)
- Focus on anthropogenic emissions
- Meet all reporting requirements









#### **Decisions made**

- Projected reference level
  - Assuming BAU from 2009 as per decision text
  - Benefit only gained if additional action taken
- Narrow definition of forest management
  - Option 1 set out in 2003 GPG for LULUCF
  - Able to do this because of MRV system design
- Use best available data
  - But acknowledge need to improve through time
  - Note plans to make technical corrections as the system improves









### Why use the narrow definition?

- Only a small proportion of forest is subject to forest management activities (e.g. harvesting)
  - State forest
  - 'Private' forests (including leasehold and other lands)
- Potential issue of leakage with this definition
  - Decreased harvest in State land moving to private forests
- Solution
  - Include all areas of public forest under management, monitor all remaining forest, bringing forest into the account when a forest management activity occurs
  - Same type of tracking of lands as used for AR&D









#### **Implementation**

- Developed a brief strategic plan
  - Checked with policy areas to ensure it would meet their requirements
  - Implementation based on the plan
- Identified models and data to be used
  - Which are interim and which are final?
  - Does any of the data differ to the MRV system?
  - Methods for projecting
- Complete report and modelling
- Internal QA/QC and review
- Preparation for technical assessment







### Key lessons and challenges

- Decide what is needed first
  - Understand international, government, policy and market requirements
- Use the requirements to set the objectives
  - Objectives will guide the methods
- Ensure consistency with MRV system
  - Both current and planned future improvements
- Clear and thorough understanding of decision text, guidance and guidelines
- Understand where uncertainties lie
  - Not just technical. Policy, internationally, others







#### **Conclusions**

- Need collaboration between all parties
  - Domestic emissions policy, forest policy, international negotiators, technical
  - Also between government agencies/ministries
- Ensure needs, objectives and consequences are clearly understood
  - Results will be measured against those needs
- Acknowledge that accounting rules are not final
  - Be involved in negotiating on these rules







## Thank you

#### **Robert Waterworth**

**Director and Senior Research Scientist International Forest Monitoring** Department of Climate Change and Energy Efficiency, Australia robert.waterworth@climatechange.gov.au

ph: +61 2 6159 7232; mobile +61 457 745 737





