

Summary of the  
Harvested Wood Products Workshop  
Rotorua, New Zealand, February 2001



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# Harvested Wood Products Workshop

- Informal workshop to support activities related to the FCCC and the Kyoto Protocol to further develop and refine concepts proposed at the Dakar meeting.
- Outcomes of the workshop contribute to the consideration of HWP issues by the SBSTA.
- 12 papers and a series of workshop sessions attended by 52 participants from 17 countries.
- Organisers: MAF, MfE and FR.
- Support from: NZFIC/FOA, AF&PA, NZFRST.

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# Background to HWP Workshop

- Reporting under the UNFCCC - national GHG inventories.
- Standard accounting framework - Revised 1996 *IPCC Guidelines for National GHG Inventories* adopted in Kyoto.
- Accounting approaches for HWP subject of debate within the IPCC process.
- May 1998 in Dakar, Senegal: Evaluating Approaches for Estimating Net Emissions of CO<sub>2</sub> from Forest Harvesting and Wood Products.

# Terminology

- **Approach** is a conceptual framework for estimating emissions and removals of greenhouse gases in inventories. Within each approach, there may be more than one method.
- **Method** is the calculation framework within an *approach* for estimating emissions and removals of greenhouse gases in inventories.
- Distinction between **reporting** requirements for HWP under the UNFCCC and the **accounting** requirements under the Kyoto Protocol.

# IPCC default approach

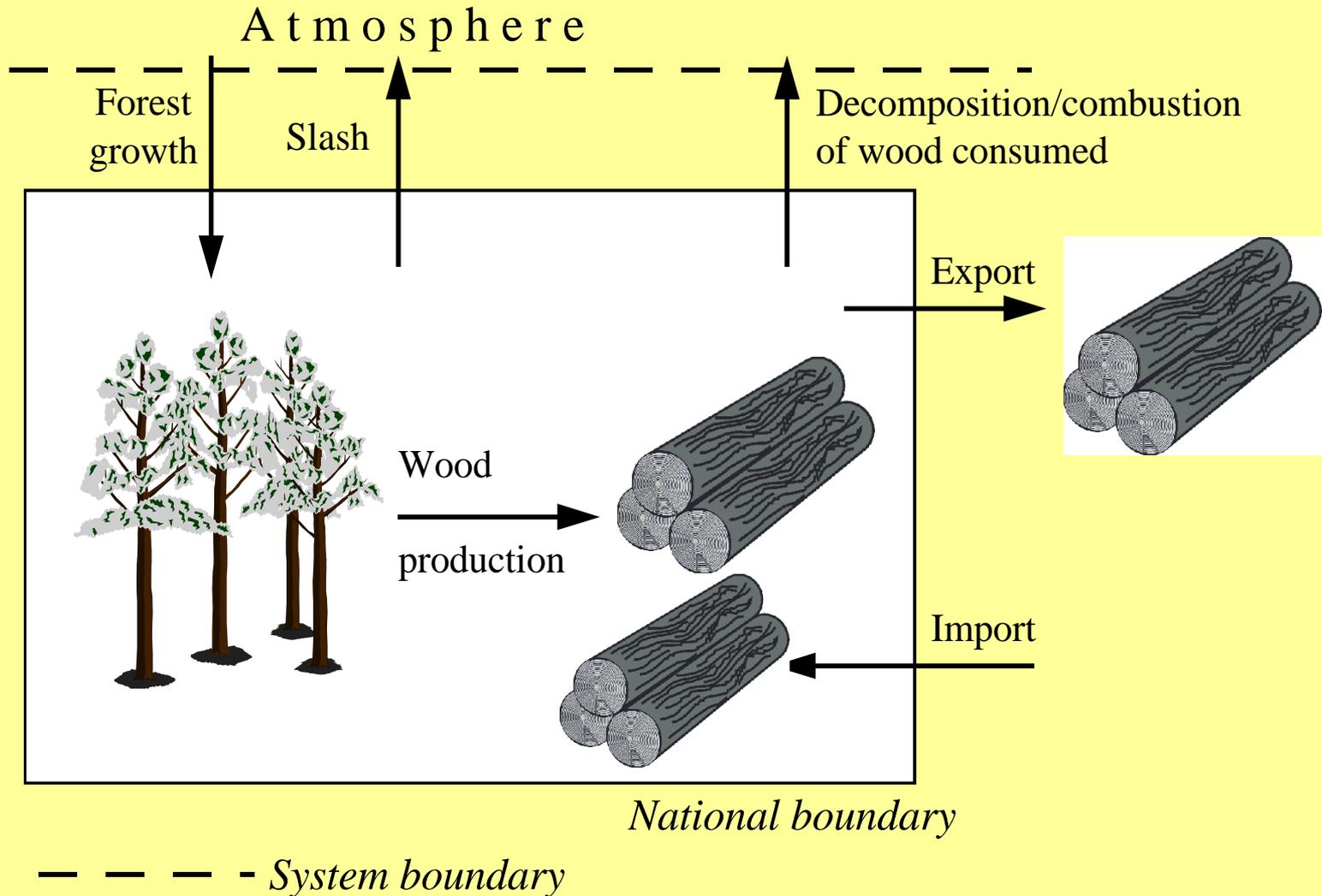
- Assumes no change in carbon stocks in wood products.
- All carbon in biomass harvested is oxidised in the removal year.
- However, inclusion of HWP allowed if data permit.
- Accounting approach or methods to be used are not yet specified.



# Accounting approaches as discussed at the Dakar Workshop

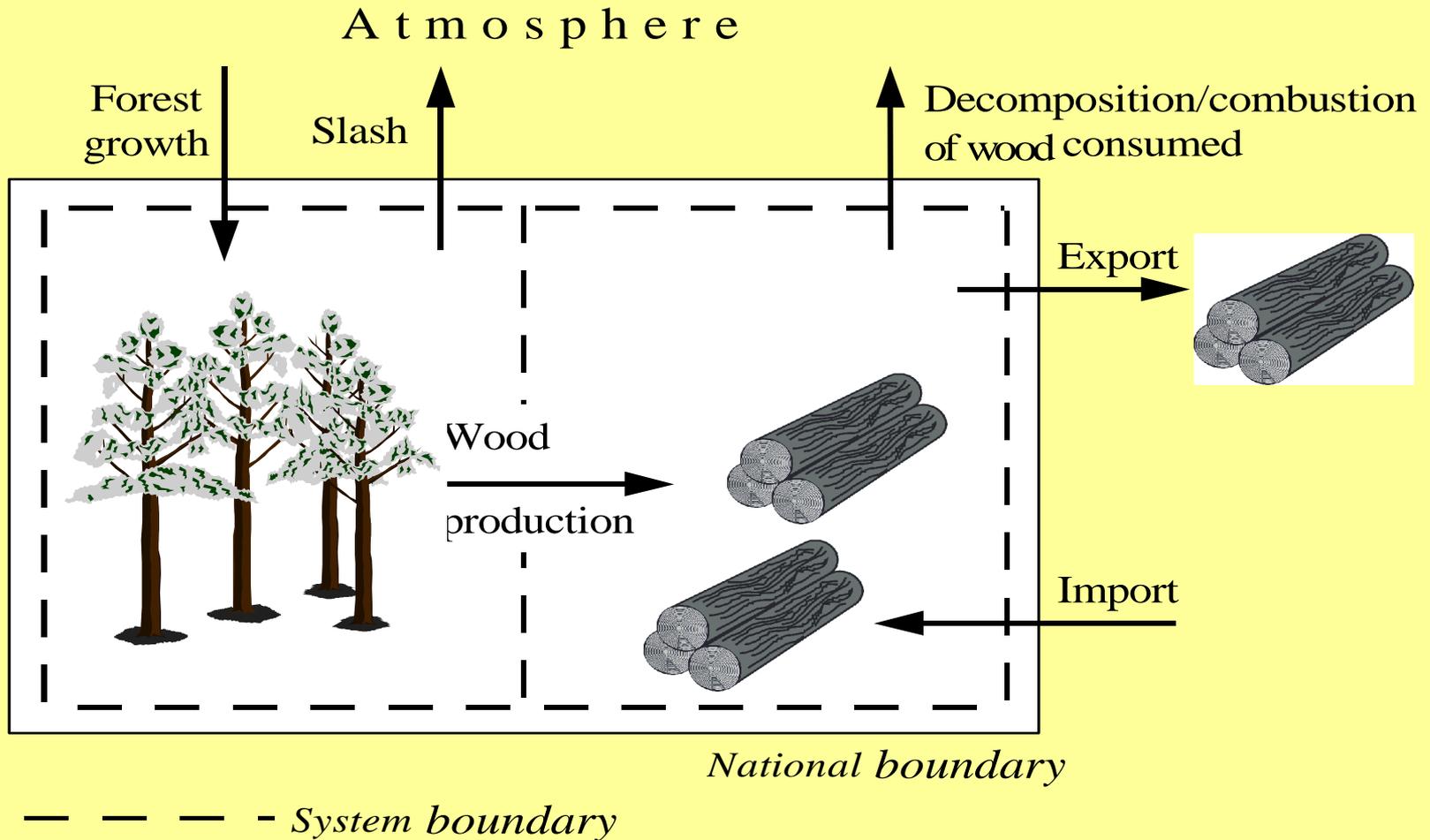
- **Stock Change** approach
- **Production** approach.
- **Atmospheric Flow** approach
  
- All three approaches offer tiered methods and have different system boundaries.

# Atmospheric flow



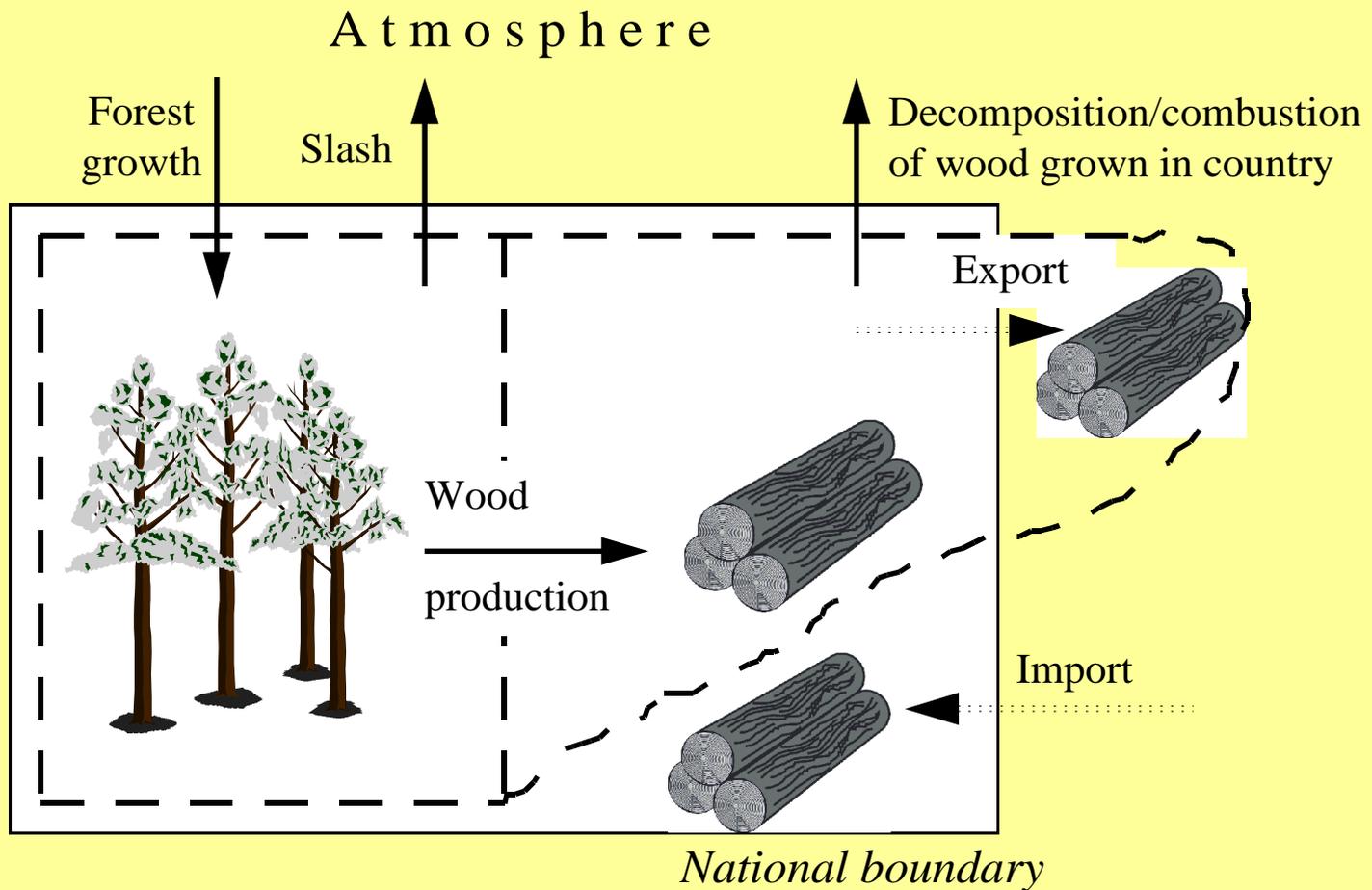
*Atmospheric flow = forest growth - slash - decomposition/combustion of wood consumed*

# Stock change



$$\begin{aligned}
 \text{Stock change} &= (\text{stock change forest}) + (\text{stock change consumed products}) \\
 &= (\text{forest growth} - \text{slash} - \text{wood production}) \\
 &+ (\text{wood consumption} \\
 &- \text{decomposition/combustion of wood consumed})
 \end{aligned}$$

# Production



--- System boundary

$$\begin{aligned}
 \text{Stock change} &= (\text{stock change forest}) + (\text{stock change domestic-grown products}) \\
 &= (\text{forest growth} - \text{slash} - \text{wood production}) + (\text{wood production} - \\
 &\quad \text{decomposition/combustion of wood grown in country})
 \end{aligned}$$

# Policy Relevant Outcomes

- Incentives for increasing the stocks of carbon in wood products and the use of biofuels considered beneficial
- Providing no disincentives for emissions reductions

# Important issues raised

- Potential conflict between globally relevant policies and limited country involvement and forest coverage.
- LULUCF accounting rules proposed for the Kyoto Protocol.
- The potential impacts of HWP accounting approaches and methods on developing countries.
- Uncertainty surrounding the Kyoto Protocol - Articles 3.3 and 3.4.

# Areas for further investigation

- 🎬 Magnitude/scale and source of HWP stocks and changes over time.
- 🎬 Improved understanding of the responses of these stocks to policy direction.
- 🎬 Greater knowledge of economic, environmental and social factors that drive demand for wood products.
- 🎬 Assessment of HWP stock changes at a global level as a means of determining the validity of the IPCC default.
- 🎬 Trade flow implications of the various approaches.



# Technical Issues

- A hierarchy of methods considered appropriate.
- Production data and imports and exports of wood products available
- Data on stocks and dynamics of products in use and after disposal more uncertain.
- Need for clear distinction between wood products in use and those disposed of in landfills to ensure no double counting.
- Difficult to trace wood products origin.

# Suggested Solutions

- Include management of HWP carbon stock as an additional activity under Article 3.4. to trace the origin of wood products
- FAO forest products database, 1961-1999, plus estimates of decay and emissions from products could be sufficient to make estimates needed for all the Dakar accounting approaches.
- FAO fuelwood data, which may be less robust, would perhaps not be required for estimating stock changes

# Example of Tier 1 calculation methodology

Roundwood harvest (including bark) =

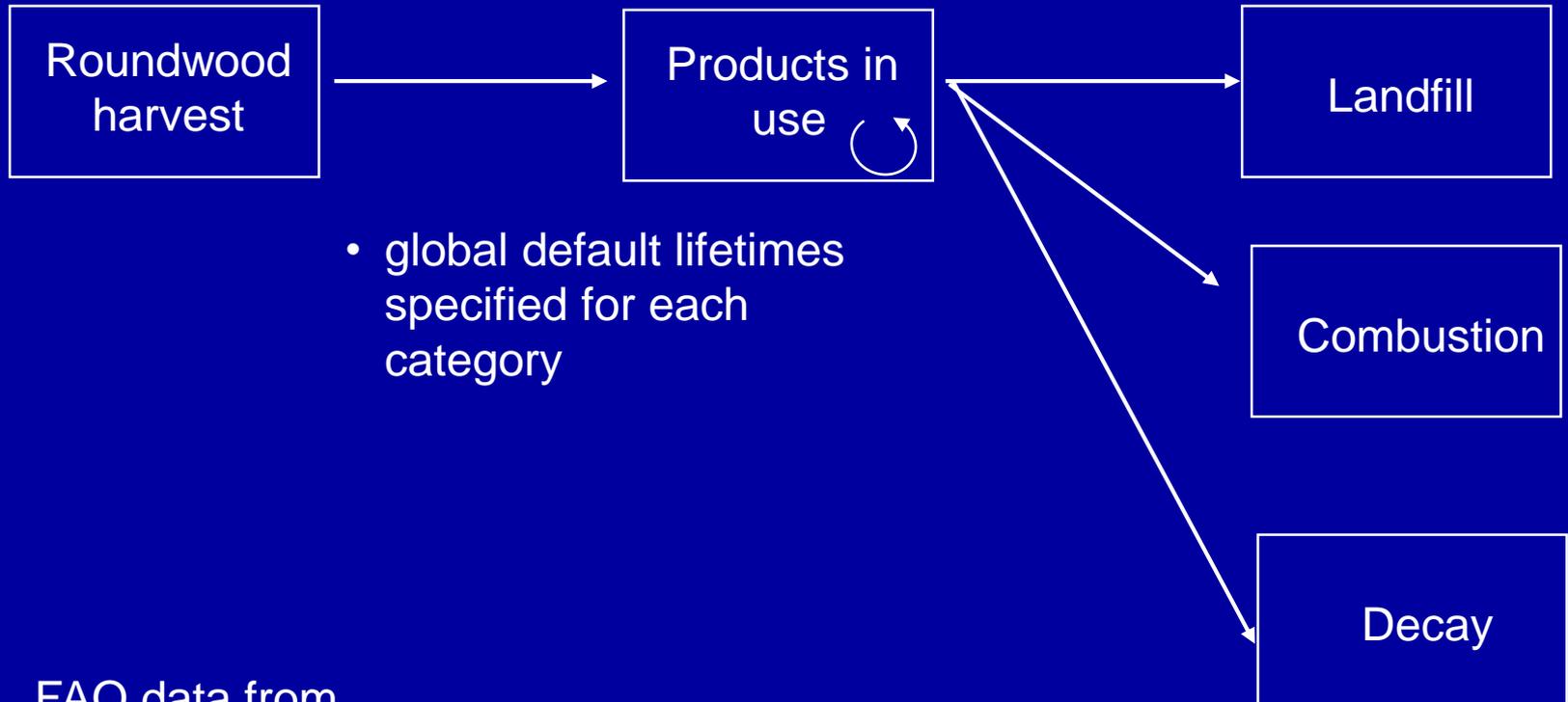
- Products with long lifetime (A)
- + Products with medium lifetime (B)
- + Products with short lifetime (C)
- + Fuelwood from roundwood
- + Residue not used for above products

# Examples of aggregated forest product categories and possible life times

<b>Product category</b>	<b>Product type</b>	<b>Possible life time (years)</b>
<b>Long life time</b>	Softwood sawnwood Hardwood sawnwood Veneer sheets Plywood	40-60
<b>Medium lifetime</b>	Particleboard (including OSB) Fibreboard Fibreboard compressed Medium density fibreboard Hardboard Insulating board	15-30
<b>Short lifetime</b>	Wood pulp Recovered paper Newsprint Printing and writing Household and sanitary Wrapping and packaging Other paper and paperboard	1-3

# Tier 1a Method

FAO product categories (aggregated)



- global default lifetimes specified for each category

FAO data from 1960-1999 to be used as specified in Table 1

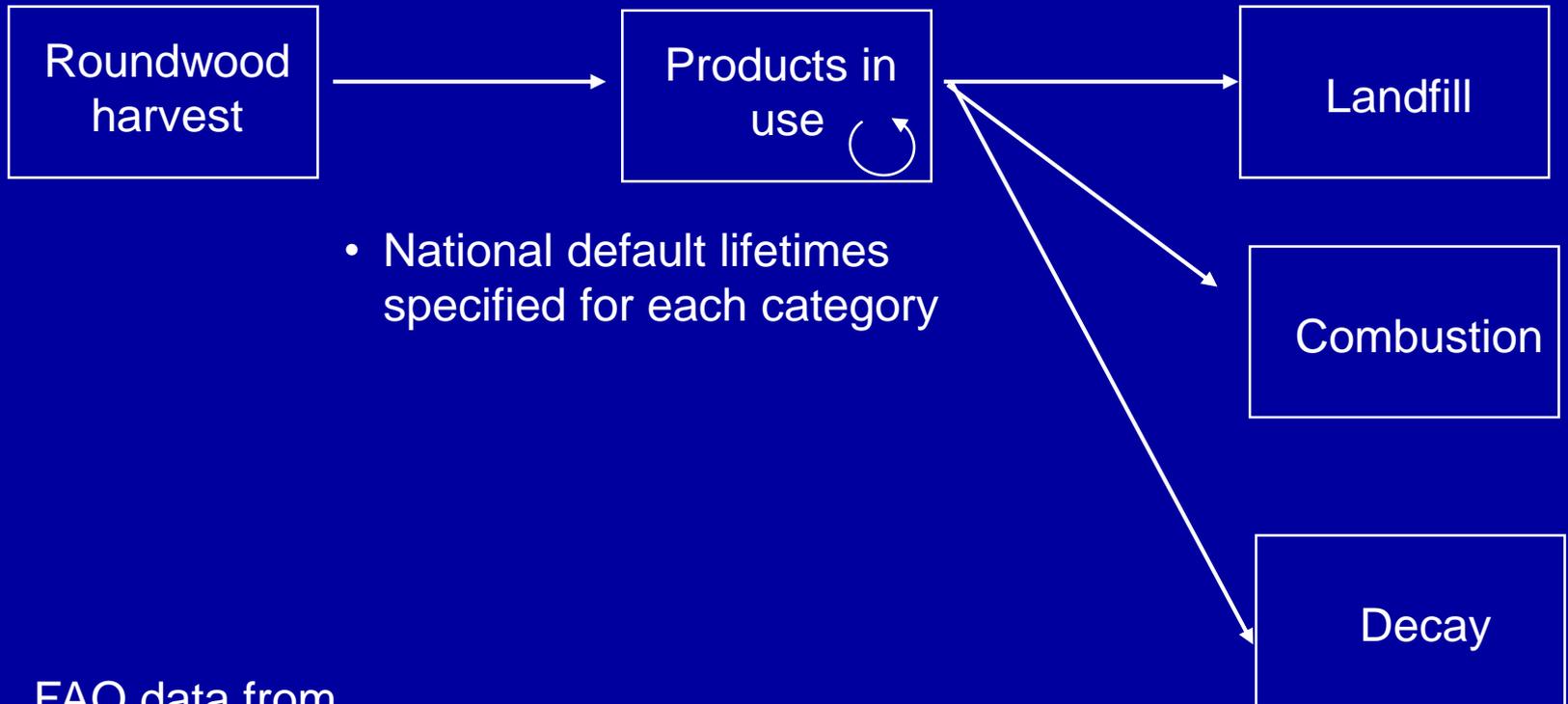
- Global default lifetimes specified by product type for landfills and decay

# Comments on Methodology

- Incorrect starting stock assumption may generate misleading results (inherited emissions ignored).
- Data on lifetimes for each product category and in landfills is required to complete the calculation.
- Estimates of product lifetimes and decay rates will vary regionally and nationally and are based on limited data.
- Improving the accuracy of these estimates is considered to be a priority topic.
- National information on product lifetimes substituted for global default values - Tier 1b.

# Tier 1b Method

FAO product categories (aggregated)



- National default lifetimes specified for each category

FAO data from 1960-1999 to be used as specified in Table 1

- National default lifetimes specified by product type for landfills and decay



# Increasing durability

Wood products last longer

Lower consumption

Wider product range

Reduced logging

Lower timber values

More product displacement

Maintain or enhance forest stocks

Encourage land use change

Increase product stocks

Fossil fuel substitution

# Tier 2 method: direct inventory

- Countries use own data e.g., roundwood removals, product manufacture, and landfill decay rates.
- Direct inventory method, based on an empirical estimate of the product pool, is preferred.
- More accurate assessment than the Tier 1 methods.
- Hybrid of Tier 1 and 2 methodologies as data availability permits with a move towards a complete Tier 2 method.

# Further Data Required

- Lifetimes of products and product pools
- Carbon content of products
- Disposition after use (landfill, burning, decay, recycling)
- Rate and extent of decay in landfills
- Rate and proportion of carbon emitted from landfills as methane and carbon dioxide
- Alignment of landfill decay methods with those used in the waste management sector.

# International Collaborative Study

- Development of a Tier 1 method and a series of case studies testing the Tier 1 and improved methods.
- Identify areas of greatest uncertainty and providing input to a variety of accounting approaches.
- An informal international study coordinated by New Zealand to develop such case studies was tentatively agreed to by the following countries:

# Tentative Country Participation

- Australia
- Canada
- Chile
- Finland
- France
- Japan
- Netherlands
- New Zealand
- Norway
- Sweden
- United Kingdom
- United States

# Initiating collaboration





<http://www.forestresearch.co.nz/site.cfm/hwpworkshop>