



**WORLD BANK GROUP**  
Climate Change

# Concepts and scope for comprehensive landscape accounting

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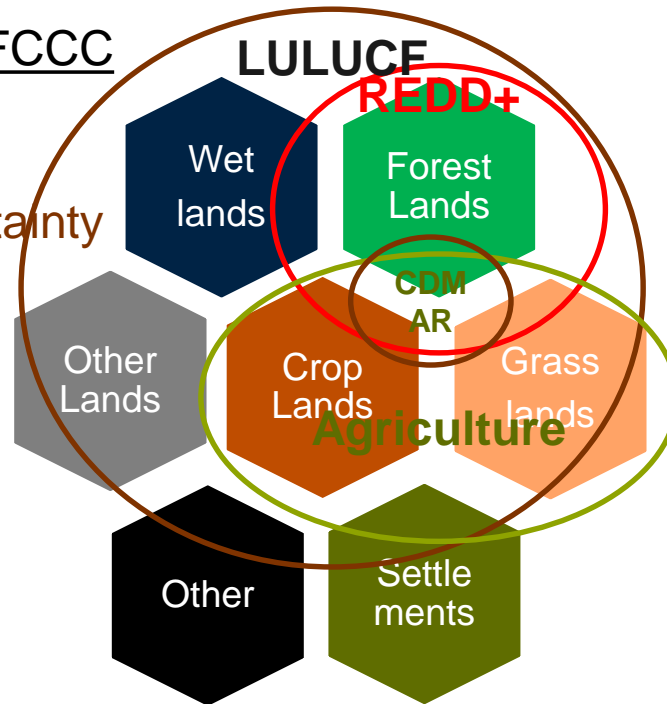




# Land Use Sector .... History under CC mitigation

## REPORTING under UNFCCC

- IPCC 1996 GL rev
- IPCC 2000 GL Uncertainty  
*Land based*
- IPCC 2003 GPG
- IPCC 2006 GL



## MITIGATION ACTIVITIES

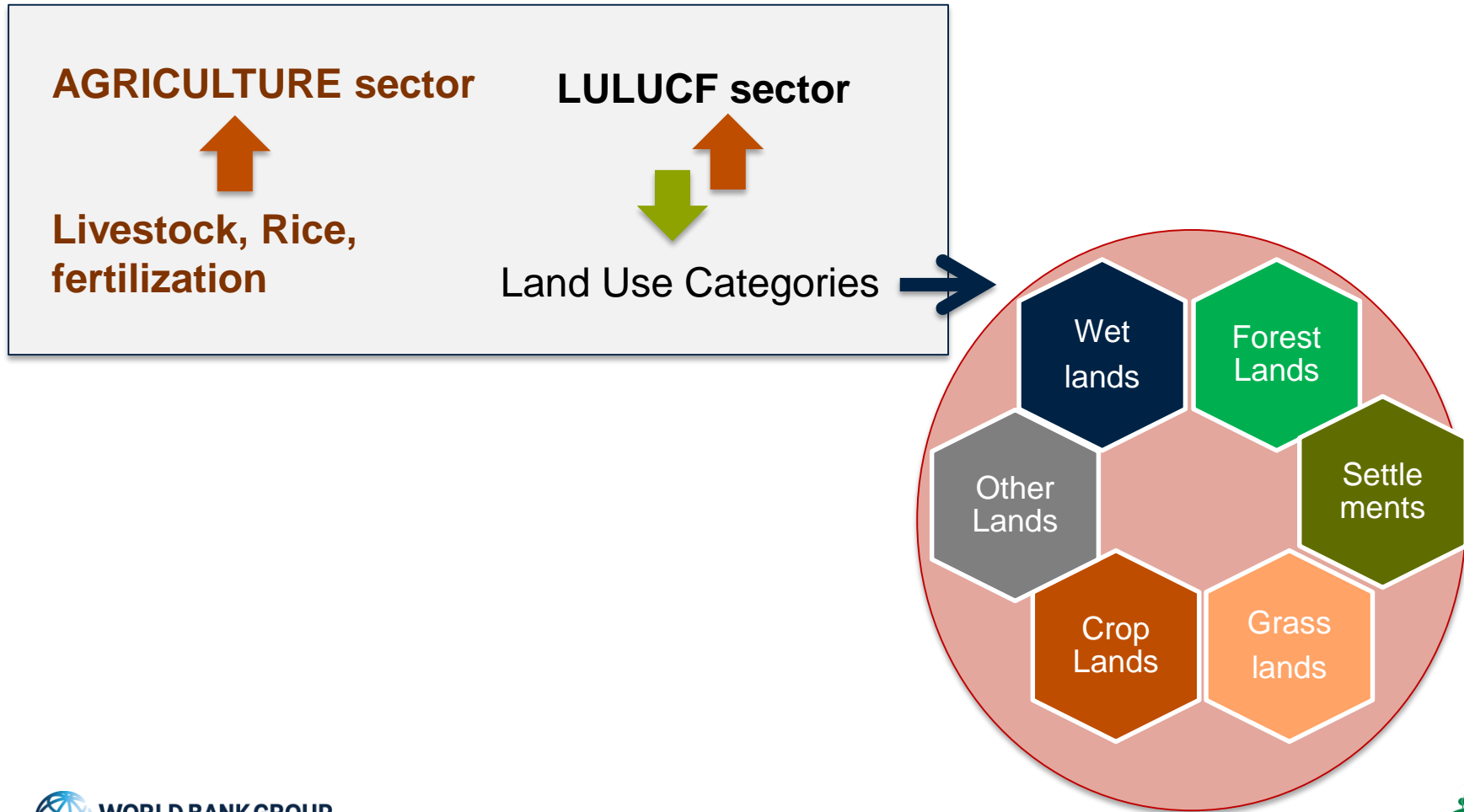
### **Annex I**

- KP 3.3, 3.4
  - FM
  - CM
  - GM
  - Re-vegetation

### **Developing countries**

- CDM AR
- REDD+ 5 activities

# LULUCF and Agriculture: GHG inventory in the National Communication

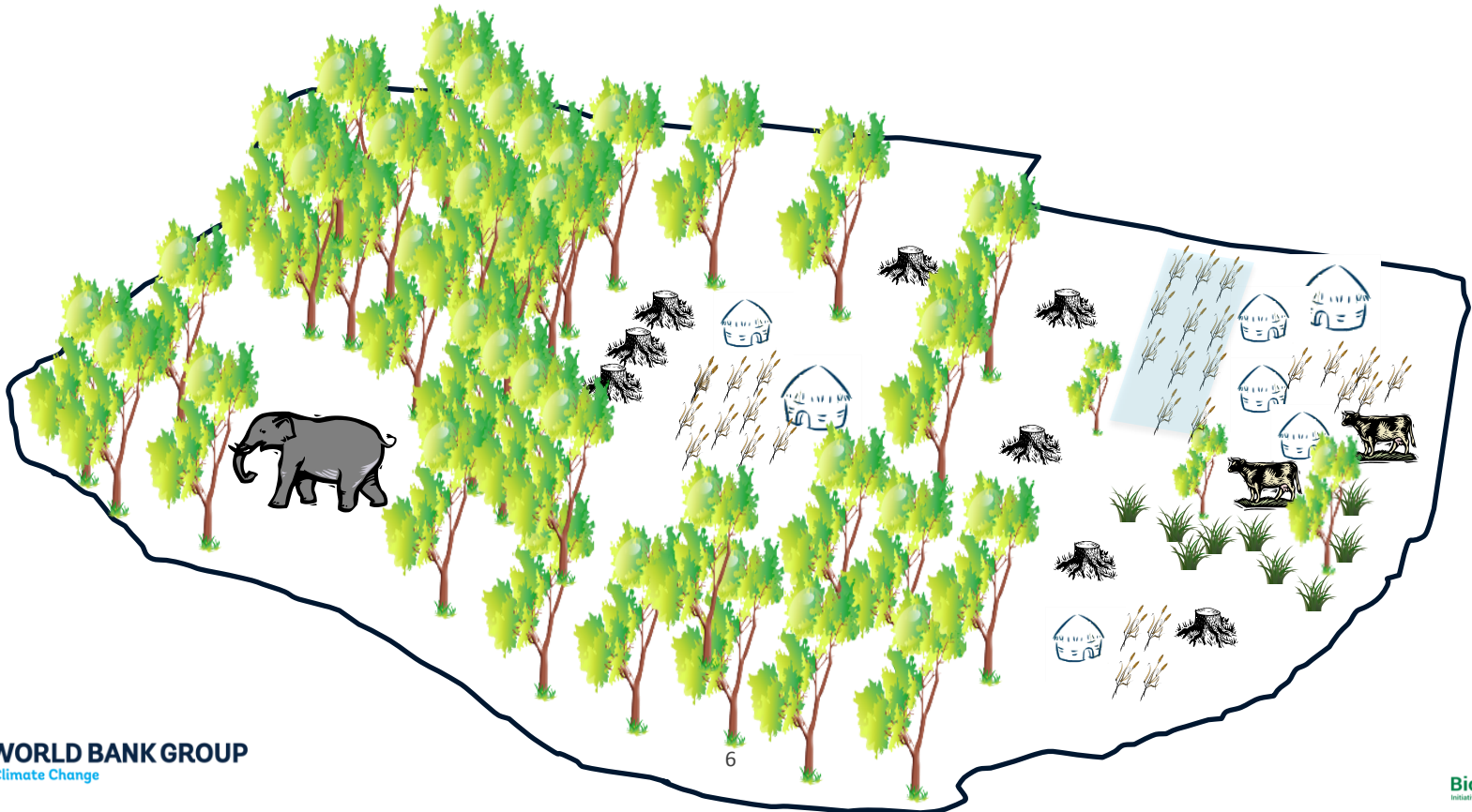


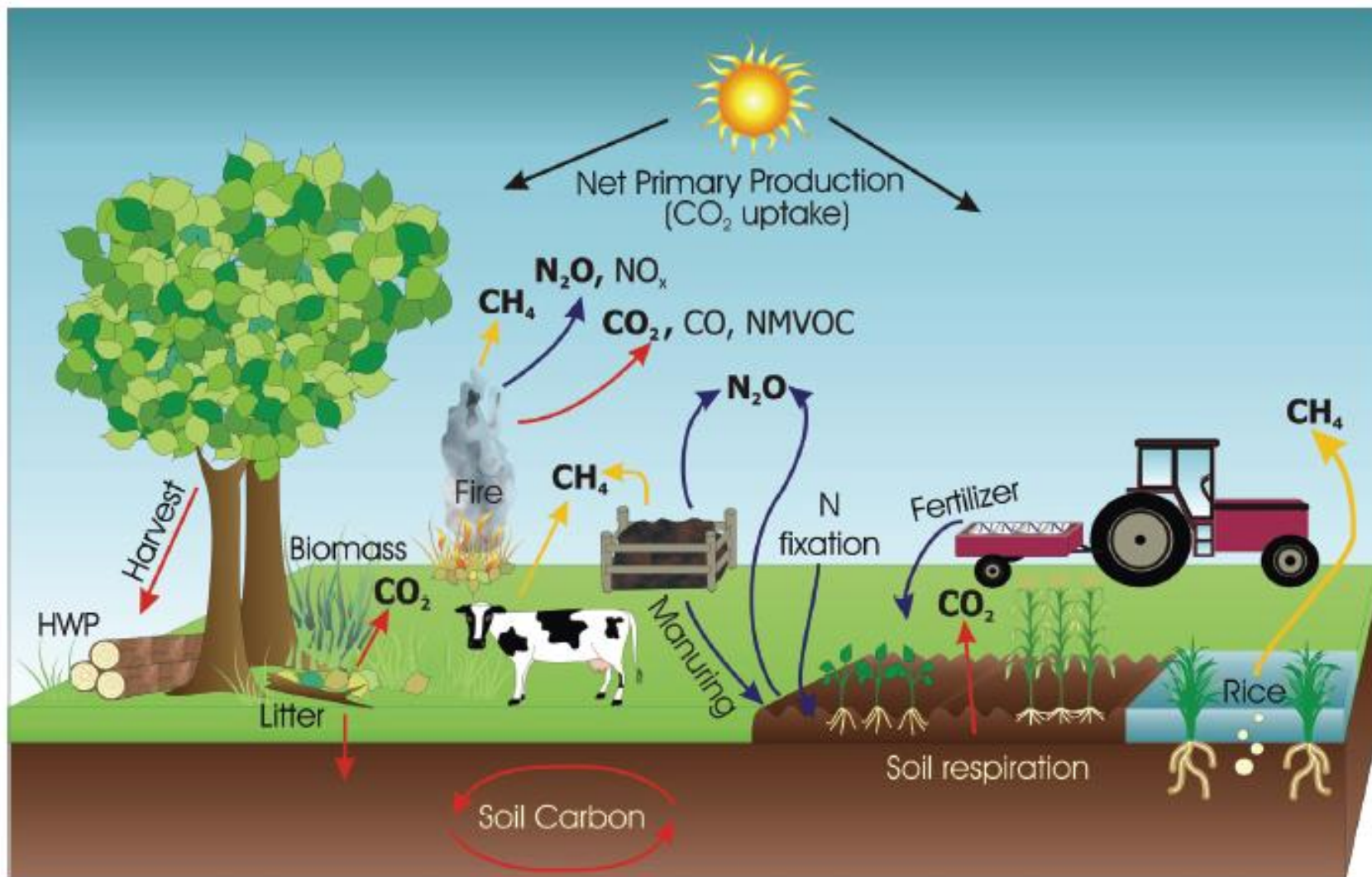


# From national reporting to accounting of emission reductions

Can the national level approaches be a basis for:

- Setting a comprehensive reference level
- Effectively monitoring emission reductions





Source: IPCC 2006

# What is comprehensive?

## 2006 IPCC Guidelines for National Greenhouse Gas Inventories:

- **Land use categories**
  - Six land-use categories
  - Countries may choose to further stratify land in each category by climatic or other ecological regions, depending on the choice of the method and its requirements
- **Pools**
  - Greenhouse gas emissions and removals determined for each specific land use includes CO<sub>2</sub> (as carbon stock changes) from biomass, dead organic matter and soils, as well as non-CO<sub>2</sub> emissions from burning and, depending on the land-use category, emissions from other specific sources (e.g. CH<sub>4</sub> emissions from rice).
  - CH<sub>4</sub> and N<sub>2</sub>O emissions from livestock management are estimated for major animal types



# What is comprehensive?

- **Key categories analysis**
  - Defined as category that is prioritized because its estimate has a significant influence on the total inventory of greenhouse gases in terms of the absolute level, the trend, or the uncertainty in emissions and removals
  - More detailed higher tier methods should be selected for key categories
  - Two approaches:
    - key categories are identified using a pre-determined cumulative emissions threshold
    - categories are sorted according to their contribution to uncertainty
- **Managed land vs unmanaged land**
  - Reporting on all emissions by sources and removals by sinks from managed lands, which are considered to be anthropogenic
  - Carbon stock estimates should be recalculated for the complete inventory time-series area whenever the total area of managed land changes in an annual inventory

# What is comprehensive?

## 2006 IPCC Guidelines for National Greenhouse Gas Inventories:

- Land use categories
- Pools
- Key categories analysis
- Managed land vs unmanaged land

### Key questions for the ISFL:

- Full inventory (using key category analysis and allowing different quality) vs choice of land use categories and pools/gases
- If choice, is there a minimum requirement to be considered comprehensive?
- Managed land only including requirement for recalculation

# Minimum quality requirements?

## 2006 IPCC Guidelines for National Greenhouse Gas Inventories:

- **3 Approaches**
  - **Approach 1:** identifies the total area for each individual land-use category within a country, but does not provide detailed information on the nature of conversions between land uses
  - **Approach 2:** tracking of conversions between land-use categories
  - **Approach 3:** Approach 2 + allowing land-use conversions to be tracked on a spatially explicit basis
  - Countries may use a mix of Approaches for different regions over time.
- **Tier**
  - **Tier 1:** Country-specific activity data are needed, but often based on globally available sources of activity data estimates
  - **Tier 2:** Emission and stock change factors are based on country- or region-specific data
  - **Tier 3:** Higher order methods are used, including models and inventory measurement systems tailored to address national circumstances



# Minimum quality requirements?

## 2006 IPCC Guidelines for National Greenhouse Gas Inventories:

- 3 Approaches
- Tier

## Key questions for the ISFL:

- Minimum requirement in terms of approach and tier



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