

**ECOFOR – International Symposium**  
**How to both harvest and preserve forest more or better**  
**Paris, 26-30 May 2010**



**FOREST PROFITABILITY MEASUREMENT**  
**A pilot project to extend FADN to Italian**  
**forestry sector**

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# Outline

- > Background and project objectives
- > The new accounting software for agricultural enterprises - GAIA®
- > Methodology to input forest stands data
- > Accounting scheme for forestry assets



# Background



- > The timber sector has been experiencing a marginal economic role in Italy
  - 95% of forests are in hilly and mountain regions (LDAs)
  - 60% are private forests, but the average size is 3 ha/firm!
- > The decline of timber market value ( $\sim 30 \text{ €/m}^3$ ) has emphasized such marginality



Scarce interest of timber producer organizations  
to collect data on sector performance

# Background

Agenda 2000 → EU finance forestry sector

12-14% of  
EU-RD budget

Forest related policies designed for:

- Forestry and Agro-forestry Farms
- Logging enterprises

Regional administrations  
→ increasing demand for economical data  
over the forestry sector

National Institute for Agricultural Economics  
(INEA) and Italian National Rural Network  
(FADN)

→ **policy impact evaluation tools**

**Forestry  
FADN  
project**



# Objectives of Forestry FADN project



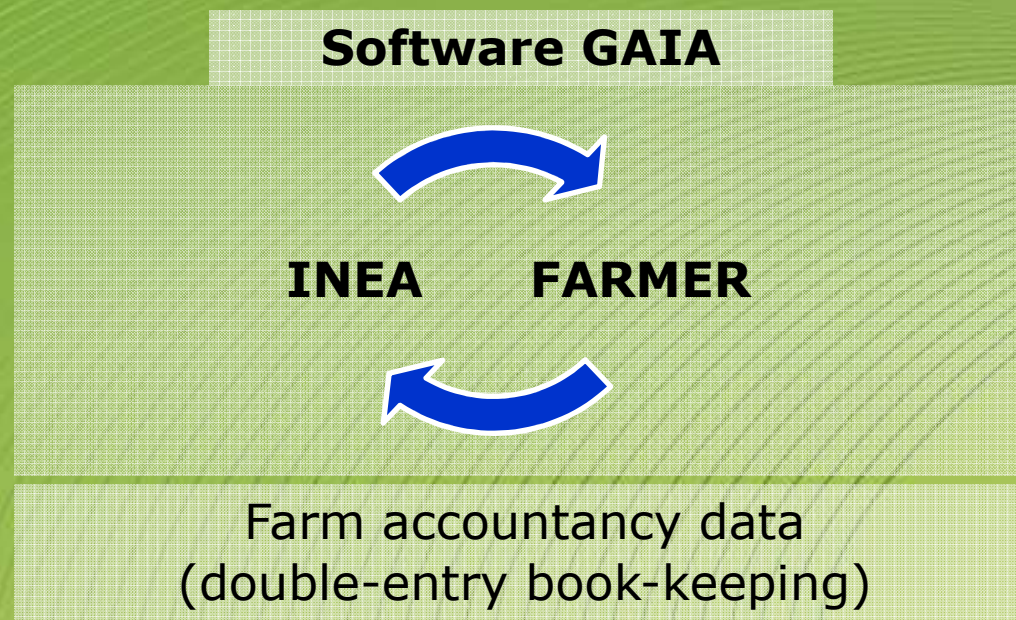
- > To extend FADN survey over forestry owners and logging enterprises → Pilot survey in Veneto Region
- > Propose a way to harmonize the multi-annual forestry production with the annual agricultural one
- > **Output** → upgrade the accounting software GAIA<sup>®</sup> used for farm data collection by INEA



# GAIA development and implementation



FADN data collection is organized and managed by INEA (since 1968)



## GAIA's strengths

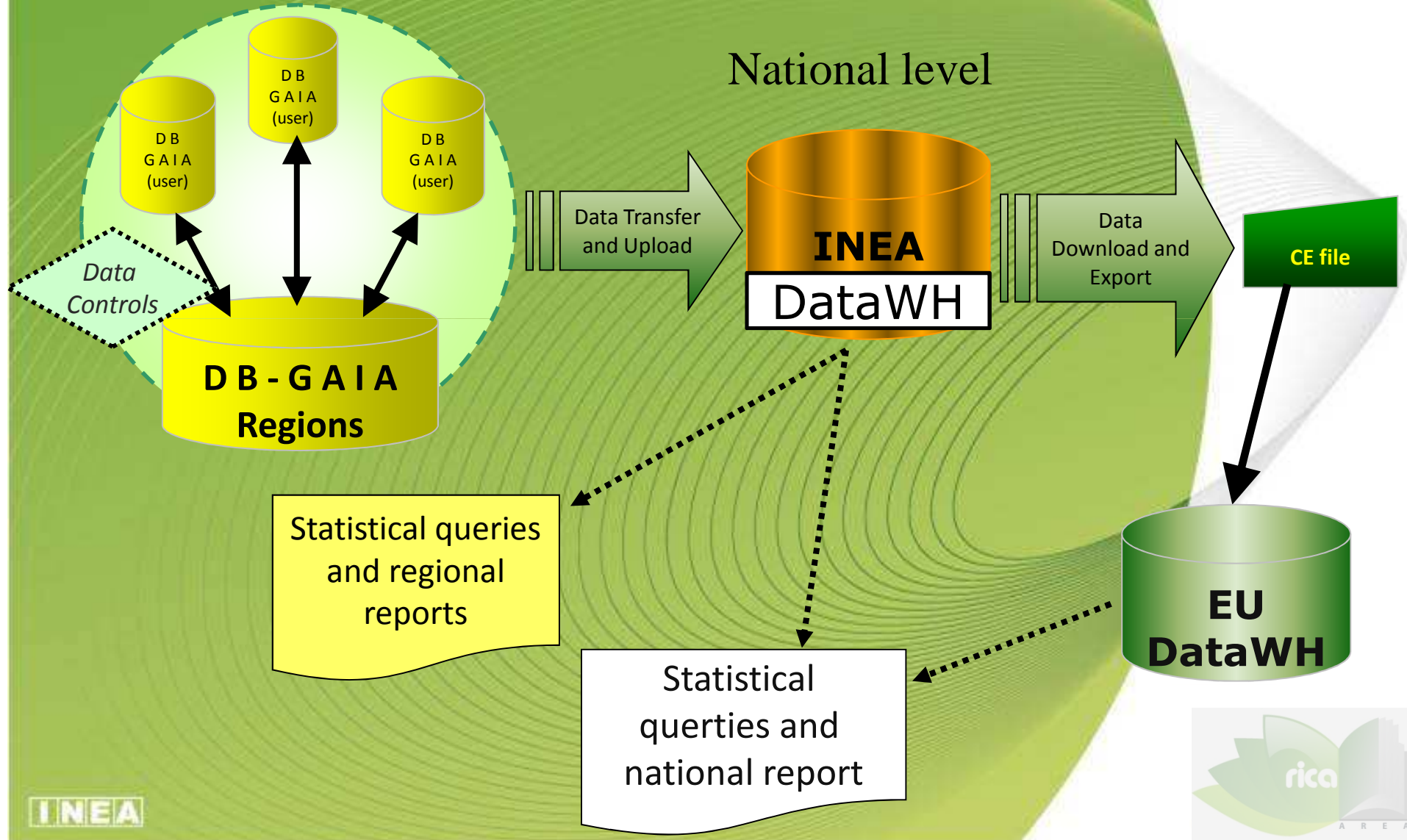
- Combination of technical information with assets management
- Calculation of financial ratios and economic indicators
- Farm efficiency and economic analysis

# Data management in GAIA®



Regional level

National level

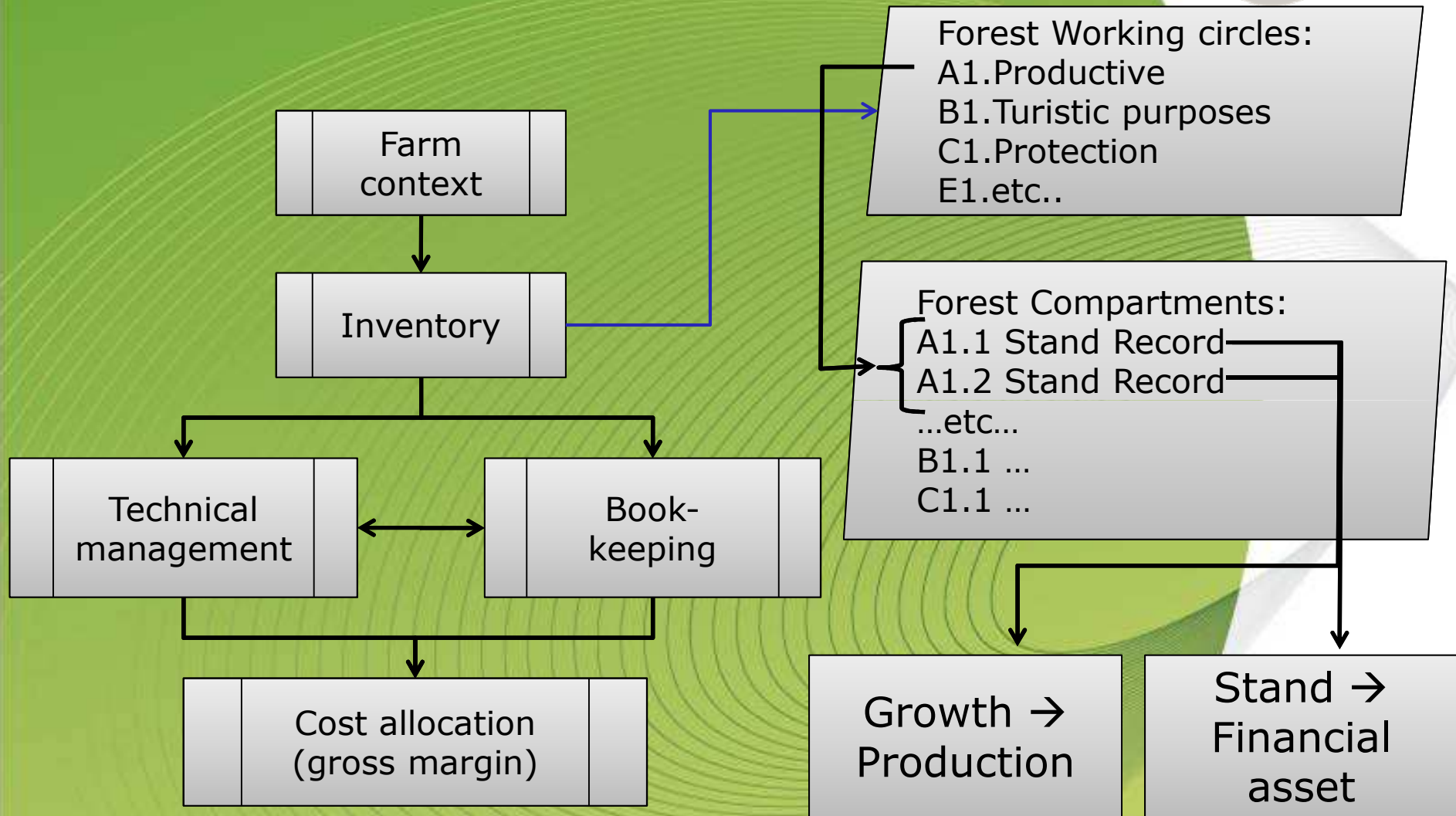








# Forest property recording method





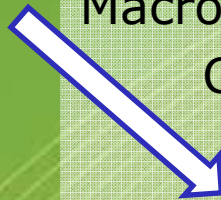
# Accounting scheme



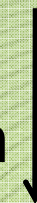
Macro-category → woodland (productive)

Category → working circle (cost center) → Gross Margin

Sub-category → compartments → stand records



Input for  
calculation



> BORCHERS *et. al.* (2002)

## Forest inventory

→ value of timber-stocks calculated differentiated according to species and diameter-classes

→ value of the opening stock at the beginning of the year

+ sales revenues – harvesting costs

→ net value of exploited timber

+/- difference between net value of exploited timber and calculated net value of the annual increment

→ value of the closing stock at the end of the year





# Open issues

We want share our proposals and get suggestion from other European experiences

## Questions

- > Which evaluation method for (productive) growing stock is the most suitable, considering the project objective?
- > When and how NWFPs (marketable) or forest ecosystem services "production" (not marketable) influences the gross margin?





**Thank you for your attention**



[www.gaia.inea.it](http://www.gaia.inea.it)

**INEA**





# Accounting scheme for forestry asset (productive forest)



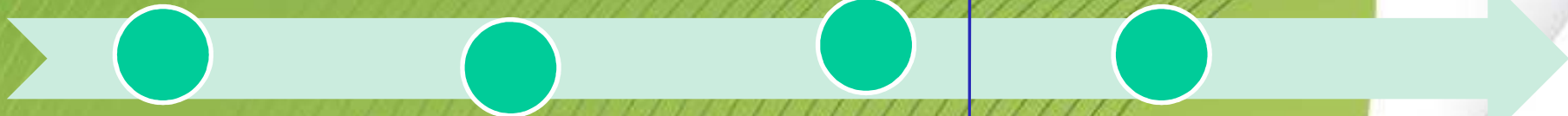
## 1.1 Productive Stand:

Vol. 10,000 m<sup>3</sup>  
Incr.% 1.5% year  
Value: 10 €/m<sup>3</sup>

Growth:  
150 m<sup>3</sup>

Production:  
• **1,500 €**

1.1 - (1/01):  
• **100,000 €**



Sales (trees)  
100 m<sup>3</sup>  
50 €/m<sup>3</sup>  
Production:  
• **5,000€**  
• **1,000€**  
• **4,000€**

P&L:  
• **5,500€**  
1.1 - 31/12:  
• **100,500€**  
Cash - 31/12:  
• **5,000€**

