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 (~30 €/m³) has emphasized such marginality

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

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

INEA

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® used for farm data collection by INEA

GAIA development and implementation

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

Software GAIA

INEA FARMER
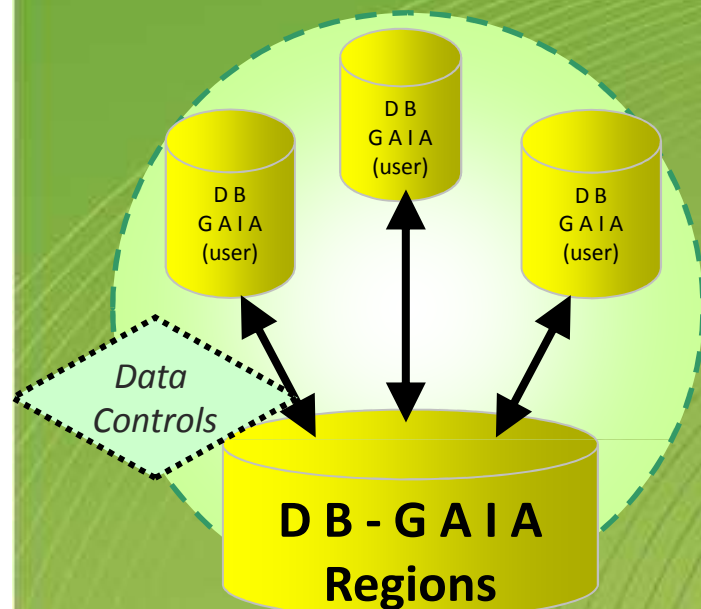
Farm accountancy data
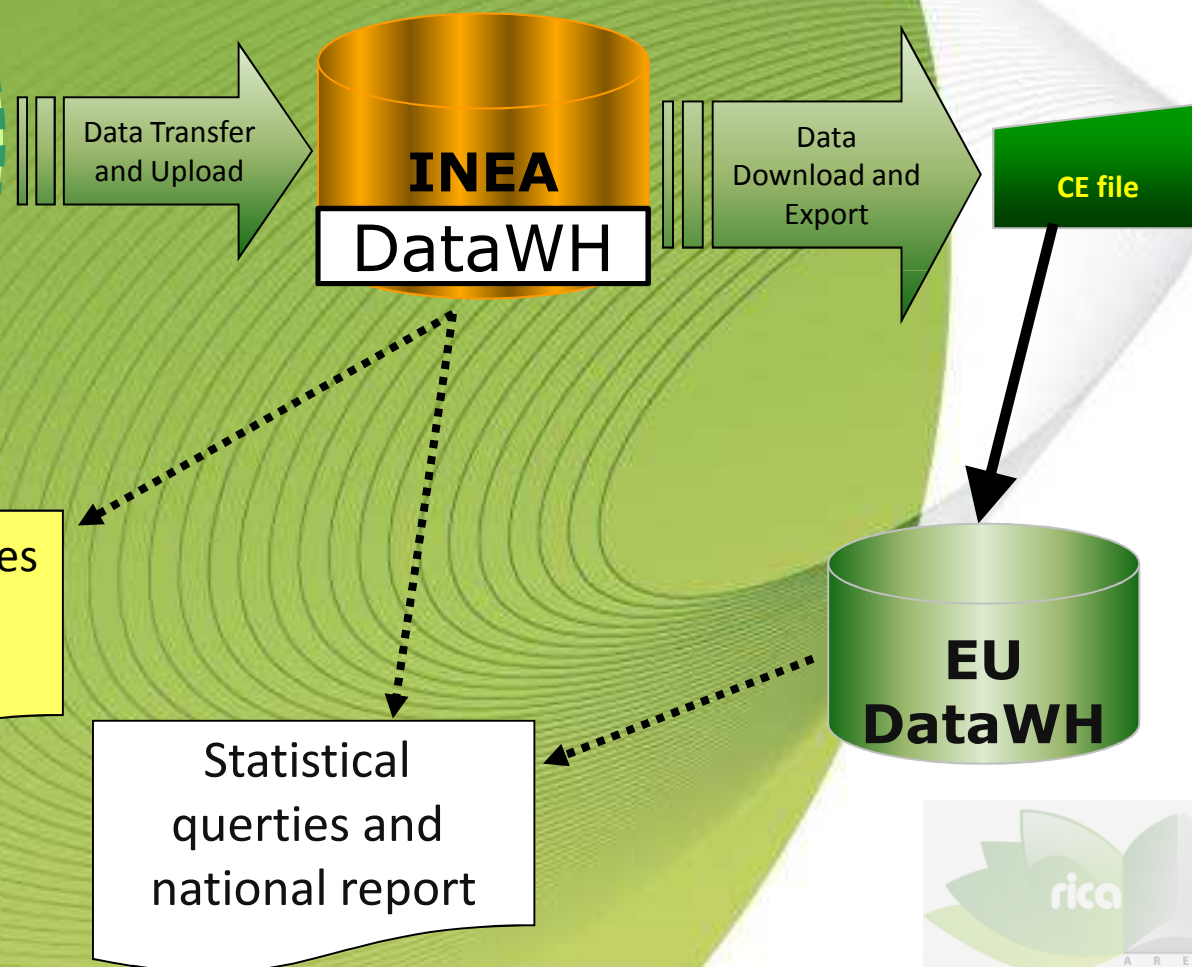(double-entry book-keeping)
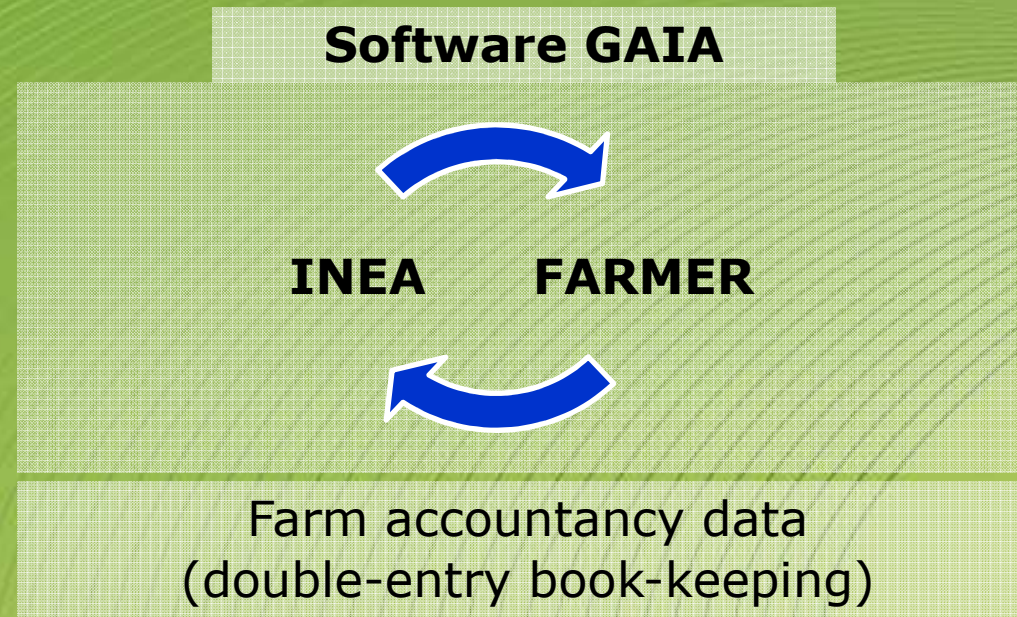
GAIA's strengths

• 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

D B
G A I A
(user)

D B
G A I A
(user)

D B
G A I A
(user)

Data Controls

D B - G A I A Regions

Data Transfer and Upload

National level

INEA DataWH

Data Download and Export

CE file

Statistical queries and regional reports

Statistical querties and national report

EU DataWH

File   Prima Nota   Strumenti   Stampa   Finestra   Help

| Albero | Comprimi | Espandi | Apri | Chiudi | Controlli | Opzioni | Fascicolo | Ricerca | Prima nota | Gaia On line | Help |

Cerca ...

- **Contesto aziendale**
- **Inventario e anagrafiche**
  - Appezzamenti e tare
  - Fabbricati e manufatti
  - Macchine e attrezzi di campo
  - Attrezzature dei centri aziendali
  - ▶ Piantagioni
    - Piantagioni agricole
    - Piantagioni forestali
  - ▶ Allevamenti
    - Animali da vita
    - Animali giovani e da ingrasso
    - Razze prevalenti
  - ▶ Magazzini
    - Prodotti delle colture
    - Prodotti degli allevamenti
    - Prodotti trasformati delle coltur
    - Prodotti trasformati degli alleva
    - Mezzi tecnici extra-aziendali
  - ▶ Certificazioni
    - Colture
    - Animali
    - Prodotti agricoli
    - Azienda nel complesso
  - Imprenditore e nucleo familiare
  - Dipendenti e collaboratori
  - Quote e diritti immateriali
  - Crediti
  - ▶ Debiti
    - Debiti di finanziamento
    - Debiti di funzionamento
  - Cassa e conto corrente
  - Anticipazioni colturali e altre compo
  - Ricavi e costi esercizi precedenti
- **Gestione tecnica**
- **Movimenti contabili (prima nota)**
- **Operazioni di fine esercizio**
  - ▶ Ripartizione di costi ai processi

Piantagioni forestali

Anagrafica | Dati generali

Centro aziendale. . . | me temporaneo ▼ | 🔍 | ▤ | Gruppo. . . . . | Bosco ▼

Tipologia. . . . . | osco di conifere ▼ | Piantagione. . . . . . . | e bianco - bosco ▼

Uso energetico. . . ☐   Anno impianto. . . | 1900

Nome / descrizione. . | Abete bianco - bosco - 1900

Superficie (Ha,aa). . | 300,00 | Sistema irrigazione. . | Assente ▼ | . .

Sup irrigata (Ha,aa). | 0,00 | Approvv idrico. . . . . | ▼

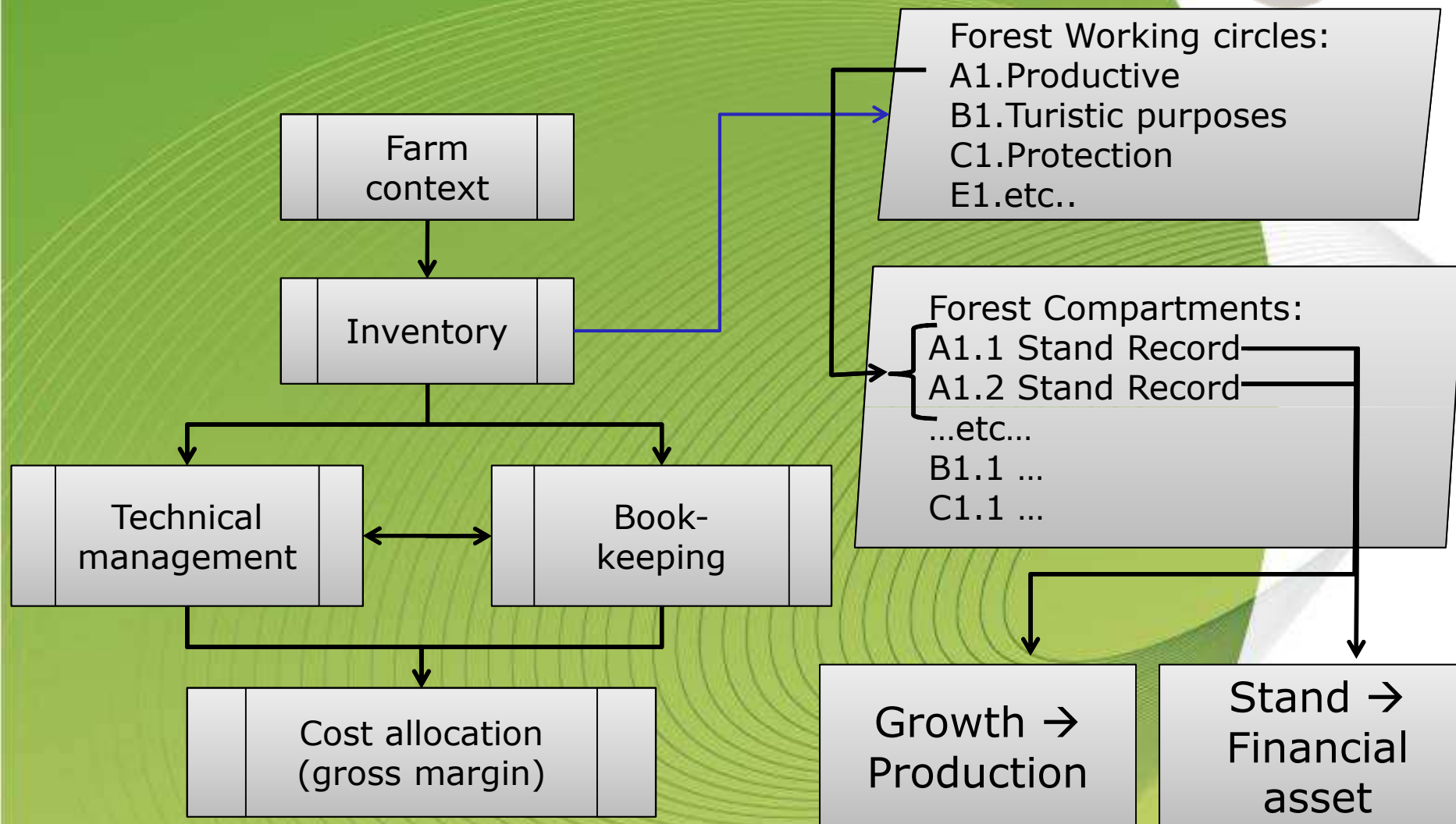| Piantagione	SAU	Irrigata	Impianto	Stato	Possesso
Boschi misti di conifere - 1900	300	0	1900	In fase di impianto	Proprietà
Larice - bosco - 1900	100	0	1900	In fase di impianto	Proprietà
Abete bianco - bosco - 1900	300	0	1900	In fase di impianto	Proprietà
Bosco misto di latifoglie - 1900	3000	0	1900	In fase di impianto	Proprietà

Visualizzazione | Report | Nuovo | Modifica | Cancella | Esci |

Forest property recording method

Farm context

↓

Inventory

Forest Working circles:
A1.Productive
B1.Turistic purposes
C1.Protection
E1.etc..

Forest Compartments:
A1.1 Stand Record
A1.2 Stand Record
…etc…
B1.1 …
C1.1 …

Technical management ↔ Book-keeping

Cost allocation (gross margin)

Growth → Production

Stand → Financial asset

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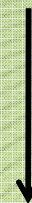# Accounting scheme

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

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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

Accounting scheme for forestry asset (productive forest)

1.1 Productive Stand:
Vol. 10,000 m3
Incr.% 1.5% year
Value: 10 €/m3

Growth: 150 m3

Production:
- **1,500 €**

1.1 – (1/01):
- **100,000 €**

Sales (trees)
100 m3
50 €/m3
Production:
- **5,000€**
  - *1,000€*
  - *4,000€*

P&L:
5,500€
1.1 - 31/12:
100,500€

Cash – 31/12:
5,000€

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