

NEW INSTRUMENTS TO IMPROVE FOREST SECTOR GOVERNANCE: A NATIONAL PILOT PROJECT TO ADAPT GAIA SOFTWARE FOR FORESTRY ACCOUNTING SYSTEM (RICA-FOR/FADN-FOR)

RICA-FOR (FADN-FOR)

**Objective:** to extend accounting survey to forestry sector

**Who:** INEA—National Institute of Agricultural Economics

**How:** adapting the annual accounting scheme of GAIA to meet multi-year accounting needs of forestry

**Why:** to have accounting results used as target variables in the policy impact evaluation (i.e. RD measure impact indicators)

**Where:** first case study in Veneto Region

Agenda 2000 + EU forestry strategy → forest related policy in rural development programme (RDP)

Policies designed for  
• Forestry and Agro-forestry Farms  
• Logging enterprises

National and Regional administrations → increasing demand for economical data over the forestry sector in order to evaluate the socio-economic impact of policies

Lack of information about accounting in forestry sector. No survey is made at a national level in Italy

National Institute for Agricultural Economics (INEA) and Italian National Rural Network (RRN)  
→ RICA-FOR / FADN-FOR

RICA-FOR Project NATIONAL COORDINATION



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CASE STUDY: VENETO REGION



Veneto Region has about 397,889 ha of forest (about 21.6% of the total regional area) divided into:  
• 395,460 ha of forests (of which 24.4% are spruce, 20.9% are mixed broadleaves and 16.95% are beech)  
• about 39% of these forests are coppices and about 83.6% are aged  
• 2,090 ha are plantations  
• 339 ha are temporarily without tree cover  
About 67% of the total forest surface is private and about 96% is submitted to general prescriptions. About 91% of the forest area in the Region is available for harvesting, without any silvicultural limitation due to legal or physical causes.  
(INFC, 2005)

Definition of the Regional unit of investigation (VENETO)

Unit of Analysis Definition	Type of Operator Threshold	Regional Data source	Number of units
A technical-economic unit that carries on forestry or forest related activities a. to product standing trees (semi-natural forest and industrial forestry) b. to transform standing trees into raw materials (logging) c. both activities	FORESTRY FARM Forest land propriety	Administrative Dataset of the authorization for logging operations	500 Forestry farms ~ 90 Public proprieties ~ 160 with Management Plan ~ 90 with Rearrangement Plan
	LOGGING ENTERPRISE Not propriety	Professional register of logging enterprises	~ 350 Logging enterprises

GESTIONE AZIENDALE DELLE IMPRESE AGRICOLE

FARM MANAGEMENT IN AGRICULTURAL ENTERPRISES

- **Farm context:** general data on the farm
- **Opening stocks:** buildings, machineries, lands, breeding livestock, labour force, certifications, agricultural products, debts and credits at the beginning of the year;
- **Technical management** of land, agricultural permanent crops, storage, labour, breeding and fattening livestock
- **Accountancy management:** double-entry registration of receipts (sales and purchases), Government and European subsidies and aids, other financial accounts
- **Closing procedures:** allocation of operational costs (calculation of gross margins), allocation of structural and investment costs (for permanent crops and unrealized crop production, i.e. durum wheat), allocation of extra ordinary maintenance, VAT.

<http://www.gaia.inea.it/>

RICA-FOR AND GAIA® - ACCOUNTING NEEDS VS METHODOLOGICAL ISSUES

- Annual production (agricultural sector) → multi-annual production (forest sector)
- Separate evaluation for Standing trees value and Bare soil value for plantation and semi-natural forest stands (as in agricultural scheme)
- Accrual basis to multi-annual costs
- Double-entry book-keeping according to IAS41

Inventory and management of agricultural and forest land in GAIA®

Woodland surfaces can be: plantation or forest

Forest surfaces will be divided into different classes (1<sup>st</sup> classification level) according to their function:

- Productive
- Recreative
- Protective or environmental

Every classes will be divided into further compartments (2<sup>nd</sup> classification level) depending to the final production (forest) or plantation year (plantation).

Technical management of forest land in GAIA®

Forest surfaces are not included in the UAA and a forest technical management is not possible with the current version of GAIA®. The proposal is to add further accounts to consider standing trees value, annual growth and appreciation/depreciation

High Trees Forest managed to obtain a production of 250 cm/ha

Values per hectare

- Stumpage value 17.5 €/cm
- Bare Soil 5,000 €
- Standing trees value 250\*17.5 = 43,750 €
- Annual growth = 5 cm/ha/year

Application

1st case: sale of 100 cm of standing trees (35 €/cm, market price)

+ Cash = 3,500 €  
- Standing trees value = 1,750 € (17.5\*100)  
+ Appreciation: 3,500-1,750 = 1,750  
+ Standing trees for annual growth = 87.5 €  
**Value of standing trees at the end of the year = 42,088 €**

Standing Trees	Appreciation
43,750	1,750
87.5	
43,838	1,750
	Annual growth
	87.5

2nd case: harvest of 80 cm of raw wood material and sale of 30 cm (50 €/cm market price)

+ Wood storage = 1,400 € (80\*17.5)  
- Standing trees value = 1,400 €  
- Wood storage = 525 € (50\*17.5)  
+ Cash = 1,500 €  
Appreciation: 1,500-525 = 975 €  
+ Standing trees for annual growth = 87.5 €  
**Value of standing trees at the end of the year = 42,438 €**  
**Value of wood storage at the end of the year = 875 €**

Standing Trees	Wood storage
43,750	1,400
87.5	1,400
43,838	1,400
	42,438
Appreciation	Annual growth
975,0	87.5

USE OF RICA-FOR FOR POLICY IMPACT EVALUATION

For the present RD programming period, the EC defined a common framework for monitoring and evaluation (DG for Agriculture and Rural Development, 2006). In particular, the document provides information on how to measure different kind of indicators to assess effectiveness of the policies. Regarding the measurement of impacts of the competitiveness enhancement measures, the EC proposes accounting results at farm level as proxy of three socio-economic indicators.

Thanks to RICA-FOR system it will be possible to measure average values of such target-variables before and after the implementation of forest RD measures, or among farms with and without funding. Anyway, extreme caution is needed to interpret the observed differences - over the time or among the individuals - as "effects" of the policies. In fact, what the impact evaluation is interested in, are not only the differences, but to what extent the measure have contributed to create these differences.

Impact indicators	Accounting results (target-variables)
Economic growth	Net Added Value
Employment creation	Net additional full-time equivalent created job
Labour productivity	Gross added value per full-time equivalent job