

NEW INSTRUMENTS TO IMPROVE FOREST SECTOR GOVERNANCE: A NATIONAL PILOT PROJECT TO ADAPT GAIA[®] SOFTWARE TO 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 provide accounting results useful for monitoring and evaluation activities (i.e. target variables in the policy impact evaluation and measure impact indicators)

Where: first case study in Veneto Region

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

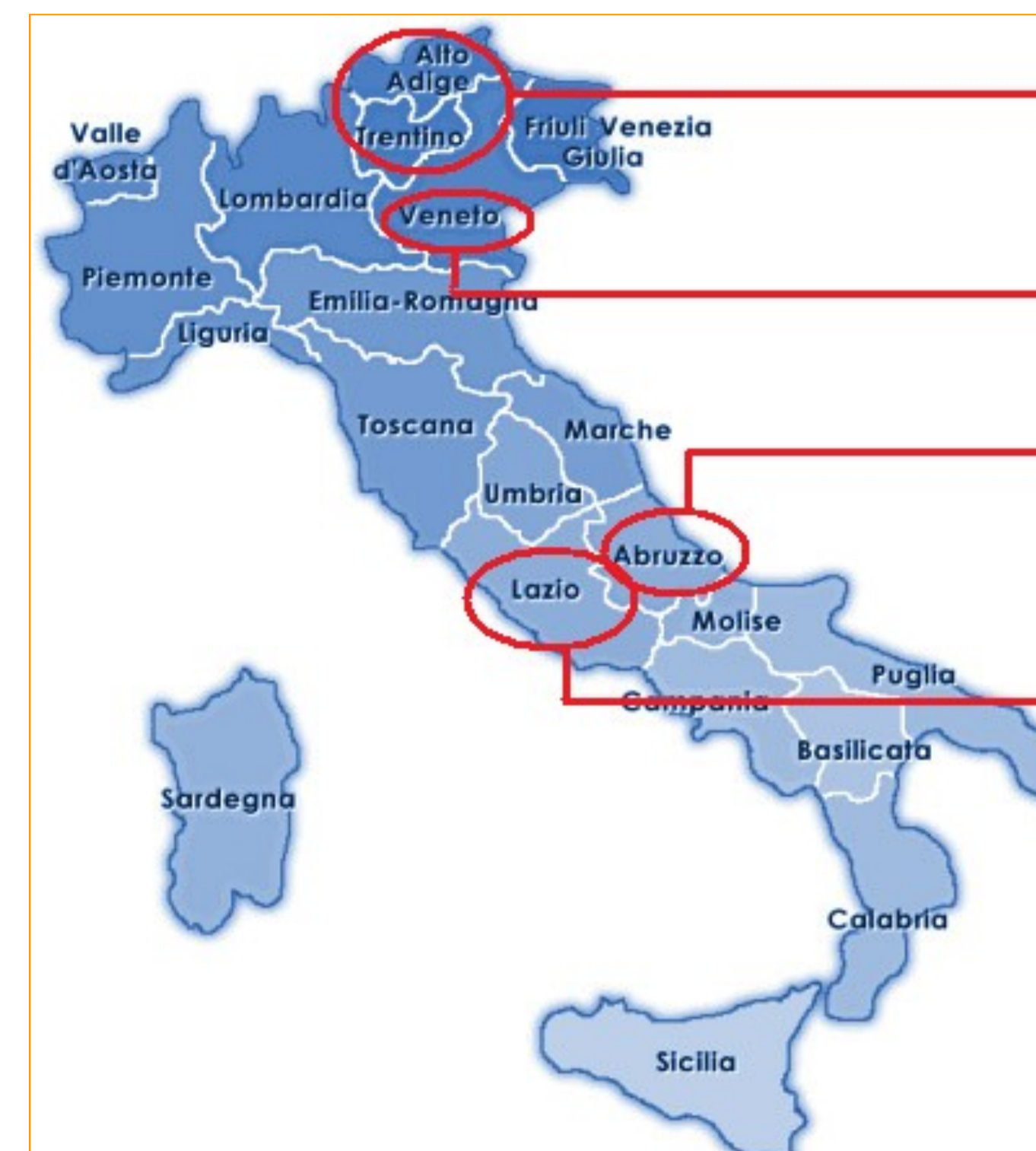
Policies designed for
• Forestry and Agro-forestry Farms
• Logging enterprises

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 16.9% 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.

(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 which carries on forestry or forest related activities a. To grow 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 25 mc/year	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 No thresholds	Professional register of logging enterprises	~ 350 Logging enterprises

GAIA 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 (1st classification level) according to their function:

- Production
- Recreation
- Protection or environmental

Each class will be divided into further compartments (2nd classification level) depending to the final production (in case of forest) or plantation year (in case of plantation).

Technical management of forest land in GAIA[®]

In RICA forest surfaces are not included in the UAA (*Utilized Agricultural Area*) 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 value 5,000 €
• Standing trees value = 43,750 € → (250*17.5)
• 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 = 1,750 € → (3,500-1,750)
+ 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
	42,088
	87.5

2nd case: harvest of 80 cm of raw timber and sale of 30 cm (50 €/cm market price)
+ Wood storage = 1,400 € (80*17.5)
- Standing trees value = 1,400 €
- Wood storage = 525 € → (30*17.5)
+ Cash = 1,500 €
+ Appreciation = 975 € → (1,500-525)
+ 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
	875.0
Appreciation	Annual growth
975,0	87.5

USE OF RICA-FOR IN THE 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 impact measurement of the competitiveness enhancement measures, the EC proposes accounting results (target-variables) at farm level as proxy of three socio-economic indicators:

- Economic growth
- Employment creation
- Labour productivity

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.

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