



Rome, 23rd June 2011
Parallel Session

Present and future role of forest resources in the socio-economic development of rural areas

Parallel Session 4

Competitiveness of the forest production sector: wood & non-wood products, supply chains, and strategies for a forest-based local governance

The use of FADN accounting system to measure the profitability of forestry sector. A practical application.

Marongiu S., Cesaro L., Tarasconi L., Florian D.

Sonia Marongiu¹

¹INEA

***National Institute of Agricultural Economics
Forest Observatory***

marongiu@inea.it

Structure of the presentation

- Presentation of the pilot project
- The biological and economical nature of forestry assets
- Case study: Veneto Region

definition of the accounting schemes

description of the forestry farm

balance sheet comparison

- Conclusions

Introduction

Differently from other European Member States and from the agricultural sector, in Italy does not exist a forestry accounting network which permit to have income and economic information about forestry enterprises.

This lack has different consequences:

1. Fragmentary knowledge of costs, revenues and income situation of forestry farms
2. Difficulties in the implementation of some policies
3. Scarce quality of economic evaluation results (i.e. impact evaluation of rural development policies)

To fill this gap INEA (Italian responsible of FADN survey) started with a project applying FADN scheme to forest sector:

- forestry and agro-forestry farms (forest owners)
- logging enterprises

MOSEFA (Monitoring the Socio-Economic Situation of European Farm Forestry), FAIR (1997)

Research plane

1st Work –Phase

Literature review: analysis of publications and other European experiences. New forestry accounting principles (IAS/IFRS 41)

2nd Work –Phase

Analysis of GAIA software used to collect agricultural data for Italian FADN: how to adapt it to meet the requirements of a forestry accounting scheme?

3rd Work –Phase

Analysis of statistics (national and regional) and creation of the sample

4th Work –Phase

Field survey: case study in Veneto region

The nature of forestry assets (1)

The application of the traditional accounting framework to forestry assets (conceptually or practically) is not easy because of

• **biological growth**

It results in increases in timber volume, quality, assortment mix and also prices (market)

• **long production cycles**

Long periods between incurring costs and generating revenues at the time of harvest

• **non market benefits**

Landscapes, biodiversity, protection functions, etc.

Value of
forestry
assets



- Annual growth of standing timber (volume)
- Improvement in the quality of products
- Increase in the price of timber



- Annual cutting
- Decrease in the price of timber
- Other external factors

The nature of forestry assets (2)

Net profit → derives mainly from sales of wood from final cutting and/or thinning during the accounting period

Large cuttings → High profit

Low cuttings → Low profit or losses

Large cuttings do not affect the value of forest in the Balance Sheet accounts, the future cutting possibilities or the future increments.

Problem: who invests in silviculture activities rather than cuttings usually has a loss, even if the market value of the forest has increased as a consequence of the activities.

In rural and marginal areas the increase of forest value is important to justify the rural development measures for forestry sector

Accounting schemes

Traditional accounting scheme

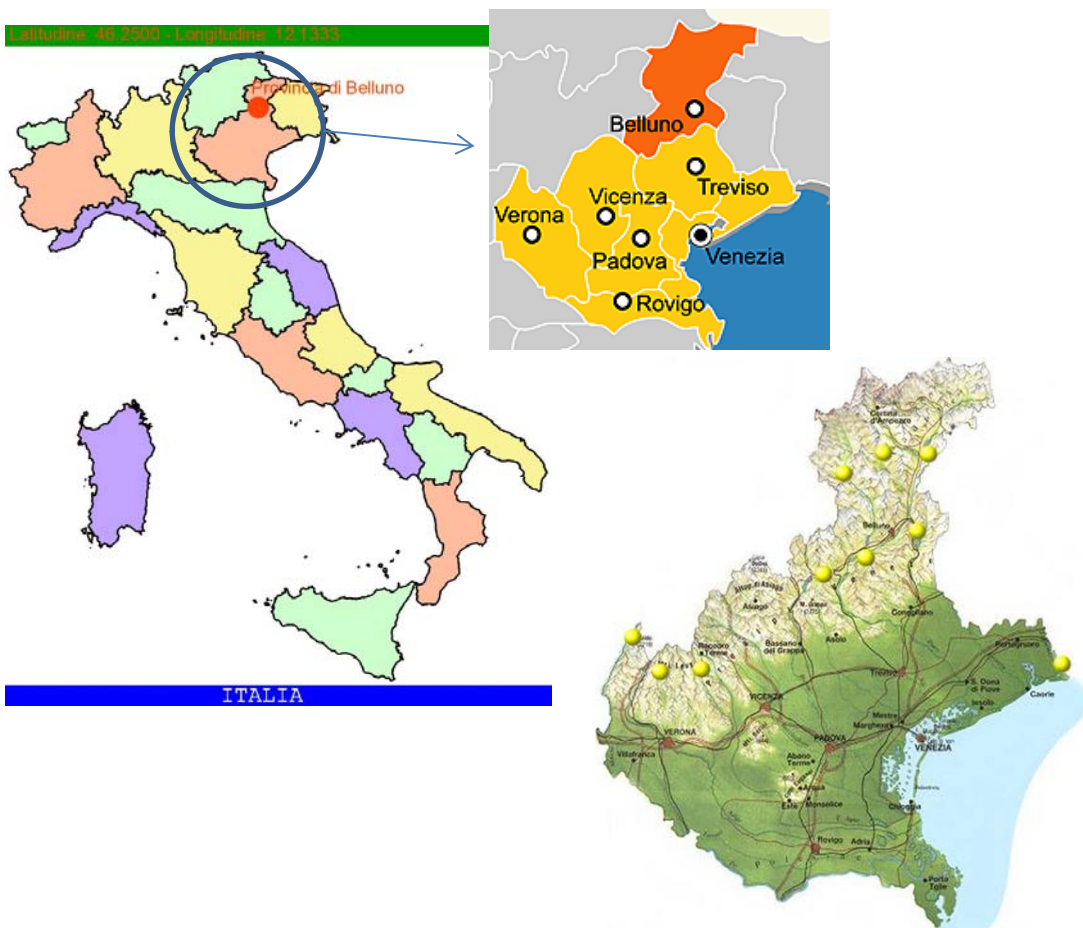
Value changes associated with growth and market conditions are recognised when they are realized (at the time of harvest). Only **realized revenues** coming from the harvested trees are take into account.

In the proposed scheme the changes are treated as a combination of capital and income adjustments

Forestry accounting scheme

Value changes associated with growth and market conditions are recognised when they occur (as tree grow and price change). **Unrealized revenues** of uncut trees (standing timber) are considered. The final cutting decrease the value of forestry asset.

Localization of the case study



- Trichiana, a Municipality in Belluno province
- Forested area: 300 HA
- Mountain
- High forest and coppice systems
- Broad leaved (beech) and coniferous trees (spruce + Scots pine)
- Average growing stock in volume: 100-300 m³/ha
- Logging area in 2009: 3.2 HA

	2009_trad	2009_for	
Saleable Gross Production	32,129.9	48,733.5	
Timber	23,690.9	40,294.5	Unrealized revenues due to the growth of forest
Other forest products	8,439.0	8,439.0	
Other revenues	0.0	0.0	
Current Costs	8,439.0	8,439.0	
Materials, consumption	0.0	0.0	
Services	8,439.0	8,439.0	Realized revenues = selling price
Other costs	0.0	0.0	
Value Added	23,690.9	40,294.5	
Other costs	13,178.7	13,178.7	
Depreciation of fixed assets	12,847.0	12,847.0	
Allocation to Provisions	331.7	331.7	
Net Product	10,512.2	27,115.7	
Wages, salaries and social security	5,933.9	5,933.9	
Operating results	4,578.3	21,181.8	
Financial costs	0.0	0.0	
Extraordinary results	9,937.7	14,294.7	
Subsidies	9,937.7	9,937.7	
Capital gains	0.0	4,357.0	Selling price – Standing timber value = Capital gains/loss
Capital loss	0.0	0.0	
Net Profit	14,515.9	35,476.5	

NET PROFIT (trad.acc.): realized revenues by way of wood sales

NET PROFIT (for.acc): unrealized revenues by way of the growth of standing forest
 \pm capital gains/capital loss

Changes in price of timber are not take into account as business transactions and do not leave any trace in the accounting system. Hyder et al.(1999) consider the **CALCULATED NET PROFIT**

CALCULATED NET PROFIT: NET PROFIT \pm change in forest value
 \pm adjustment of net interest
 \pm compensation for own work

It is reasonable to assume that real stumpage prices will change over the next five to ten years

Conclusions and remarks

- In Italy, no efforts have been directed for developing common rules to collect data about forestry sector at a farm level. There is not any recommendation relates to the evaluation of forest economic value.
- The distinction between standing timber and growing timber is important
- Failure to measure the unrealized values should be regarded as a deviation from the accounting principles
- Management plans are important to have a good forestry accounting survey
- The unrealized values are important in the evaluation of the economic value of forest, especially in case of low cuttings. In rural and marginal areas the increase of forest value is important to justify the rural development measures for forestry sector (impact indicator)

Thanks for your attention

