



LIFE09 ENV/IT/000078



Managing forests for multiple purposes: carbon, biodiversity and socio-economic wellbeing

01/10/2010 – 30/04/2016

€ 5'030'000 (50% cofunded by LIFE+)



With the support of CFS,



Slovenian Forest Service, Abruzzo Region
Lorenzago di Cadore

Workshop on
"CLIMATE ACTION IN AGRICULTURE AND FORESTRY"
*Climate smart land-use policy: best practices and innovation from LIFE and Horizon
2020 projects*



Project partners - Beneficiaries

Coordinator

CNR – National Research Council of Italy

Associated Beneficiaries

University of Molise – DiBT, Dep. of Biosciences and Landscape

CREA – Council for Research in Agriculture and Analysis of Agriculture Economy

Veneto Region – Forests and Parks Project Unit

Molise Region – Agriculture and Forest Directorate, PSR-Leader Support

Slovenian Forestry Institute

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Environmental problem targeted by the project

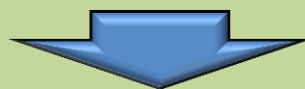
Indicators of Sustainable Forest Management MCPFE (Ministerial Conference on the Protection of Forests in Europe, 2003) - now Forests Europe

Set to check with repeated measures, the overall state of forest resources – COUNTRY LEVEL

PROBLEM



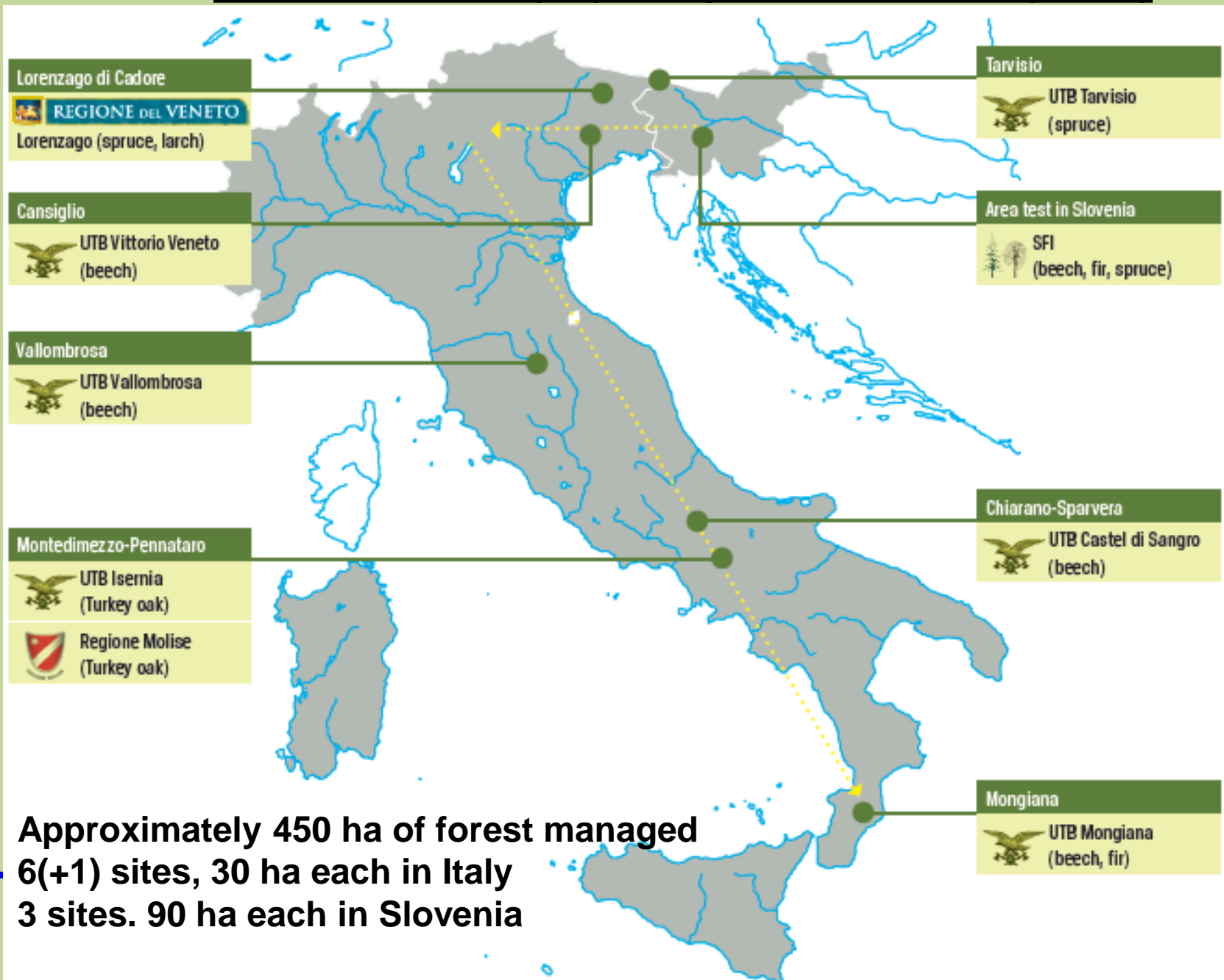
- the indicators are Macro-indicators for long term trends
- too general for an operational application at management scale
- processes in forest ecosystems are complex



Collect data on SFM indicators, linking them to specific and multipurpose forest management practices

- **Testing and verifying the effectiveness of forest management options in meeting multiple objectives** (production, protection, biodiversity, etc.), providing **data, guidance and suggestions of best-practice.**
- **To collect data related to the main Pan-European indicators for Sustainable Forest Management (MCPFE, 2002) with particular emphasis on indicators related to carbon cycle and biodiversity** (Criterion 1 and 4)
- **To develop and test additional indicators**
- **In the selected forest test areas, owned by public bodies, the project compares the traditional management practices with “innovative” practices proposed by the Project.**
- **Demonstration and dissemination of results – increased awareness on forest management**

Where we work(ed): Project Test Areas (Sites)





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MANFOR CBD

MANAGING FORESTS FOR MULTIPLE PURPOSES:
CARBON, BIODIVERSITY AND SOCIO-ECONOMIC WELLBEING

Results: examples on biodiversity and carbon

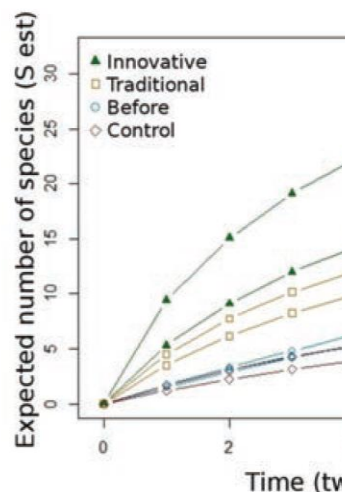
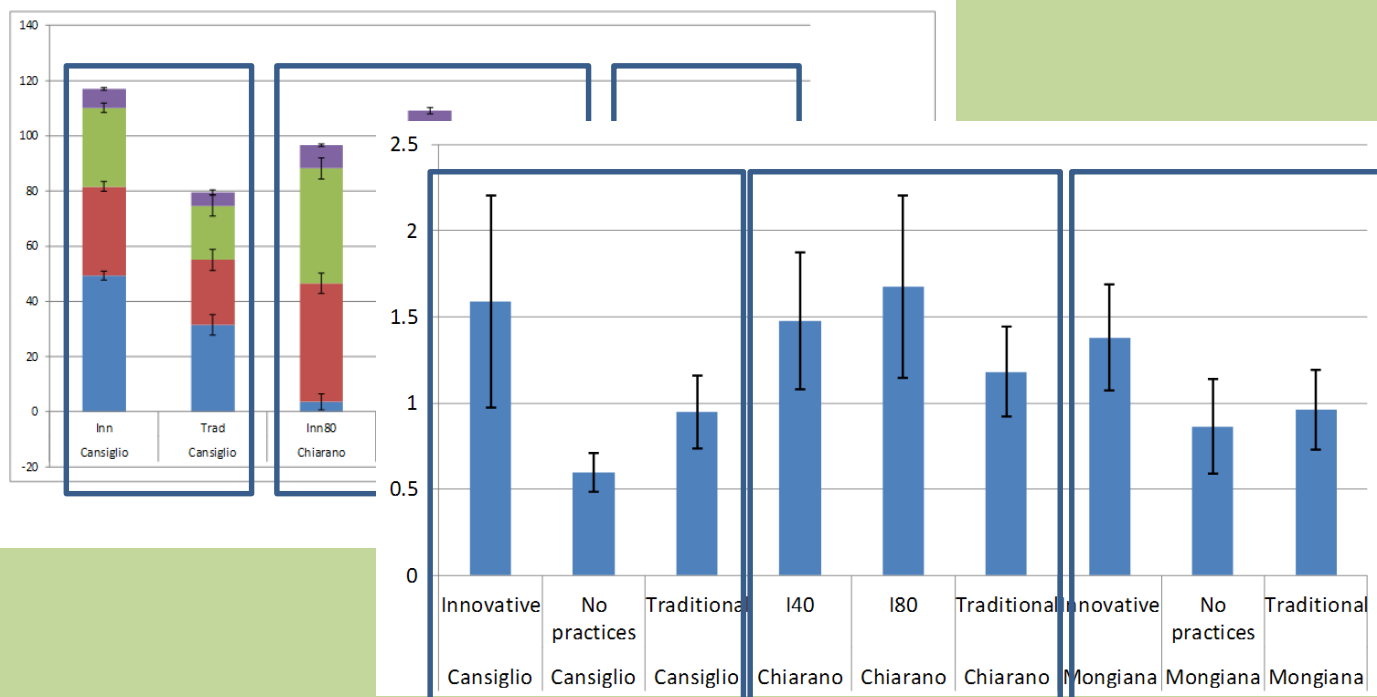


Figure 1. Estimated Syrph forest found increasing as the different management (n=2), traditional (n=2), and control (n=3).

3.2 Roundwood Value and quantity of marketed roundwood (Mg DW ha⁻¹)



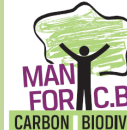
De Cinti et al (Eds) 2016

Workshop on

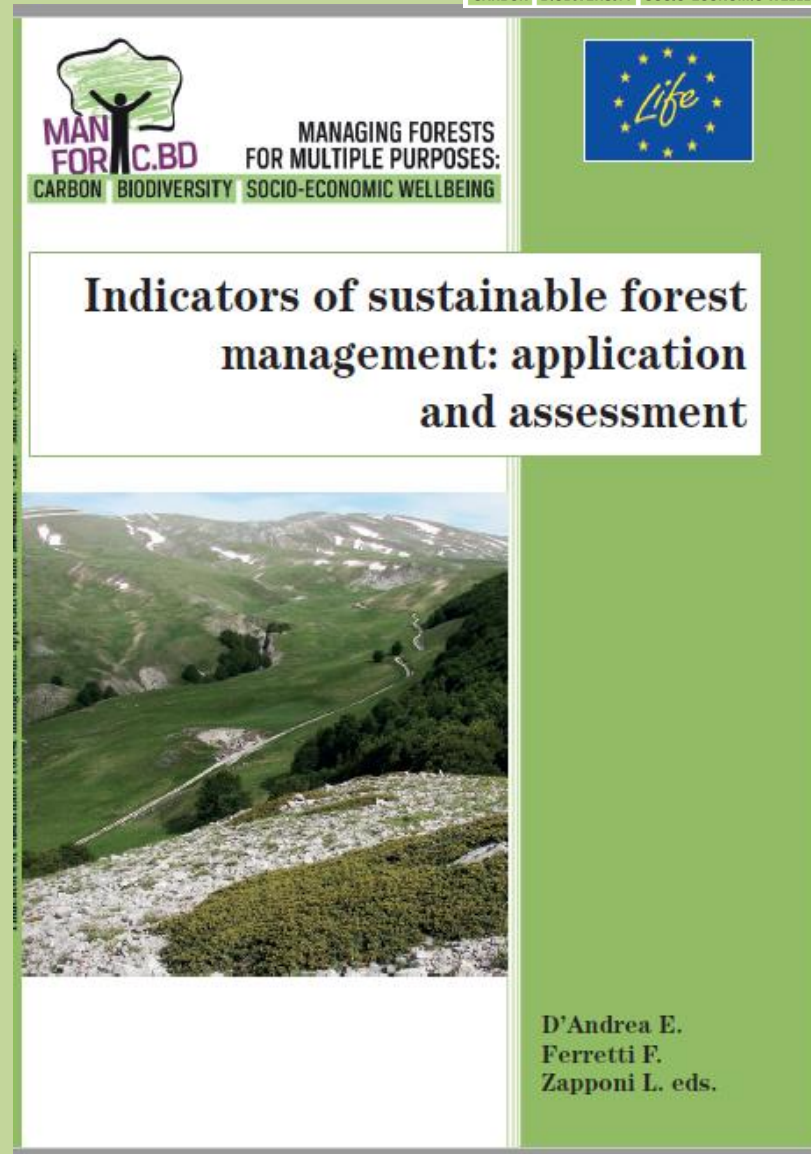
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MANAGING FORESTS
FOR MULTIPLE PURPOSES:
CARBON BIODIVERSITY SOCIO-ECONOMIC WELLBEING



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How results from the project can be suggested as «good practices»

Di Salvatore U., Ferretti F., Zapponi L., Cantiani P., Bombi P., Matteucci G., De Cinti B.



Selective thinning increases

**Mechanical stability
of standing trees and
forest stability in general**

**Economic value
of the wood products**

**Structural diversity
of the forest**

Crown thinning

**In the case of mature forests it should be preferred
to selective thinning because of minor stability issues that could be
take place in the first years after interventions**

Light thinning

**Contributes to a more balanced equilibrium of the
storied structure, triggering regeneration establishment (canopy
opening) and allowing to concentrate log harvesting along each strip**



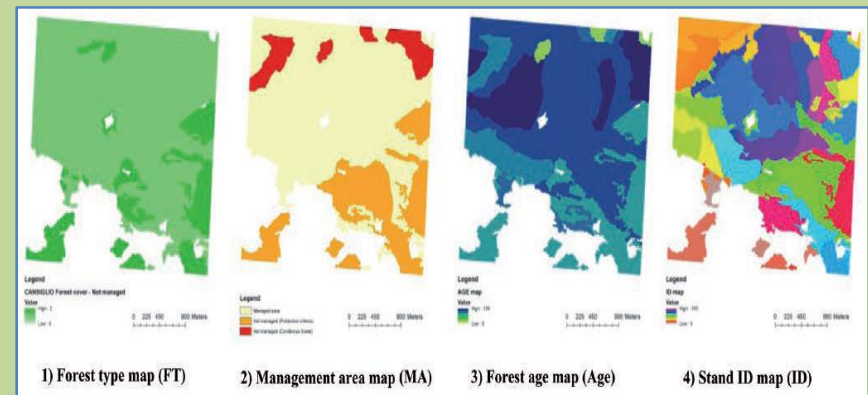
Best practices pro biodiversity conservation

1. to increase diversity at stand and landscape scale

Following a **diversified forest management strategy** allowing the co-occurrence of forest patches with different forest structures

Mixing silvicultural treatment. Avoiding systematic thinning or cutting on large areas

Replicating the silvicultural treatment in different areas every few years (**landscape**)



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Best practices pro biodiversity conservation

2. to increase deadwood amount and the retention of veteran and senescent trees

Releasing standing indifferent trees and intercropping trees.
Increasing the mortality of dominated or defective trees

Girdling or **cutting** some selected trees and **left on the ground**
(4-5 /ha) Spatial distribution (**Stepping stones**)



Best practices pro carbon stock (mitigation – adaptation)

3. to increase carbon sequestration and carbon stock

Increment of the vertical structural diversity to improve photosynthesis and carbon storage (**Release indefferent and intercropping trees**)

Production of good quality wood for durable products (**Selective thinning**)

Support the achievement of older stand ages and higher growing stocks. Increase the **flexibility** of future management options



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Thanks and: questions?

<http://www.manfor.eu/>

