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SHAPING FUTURE FORESTRY FOR SUSTAINABLE COPPICES IN SOUTHERN EUROPE:
The contribution of LIFE FutureForCoppiceS project

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LIFE ENV/IT/000514
START
01-OCT-2015
END
30-SEP-2018

Background

Different management regimes have direct effect on forest processes , on environmental changes and climate mitigation.
Coppice forests are widely distributed in EU, where they cover approximately 23 millions ha
Coppice forests provide a number of goods, from energy (fuelwood) to non-wood production (mushrooms, honey, cork, fruits) and a number of ecosystem services (recreation, water, biodiversity)
Coppice forests are included in the level II network, BUT coppice is a management option barely considered in SFM

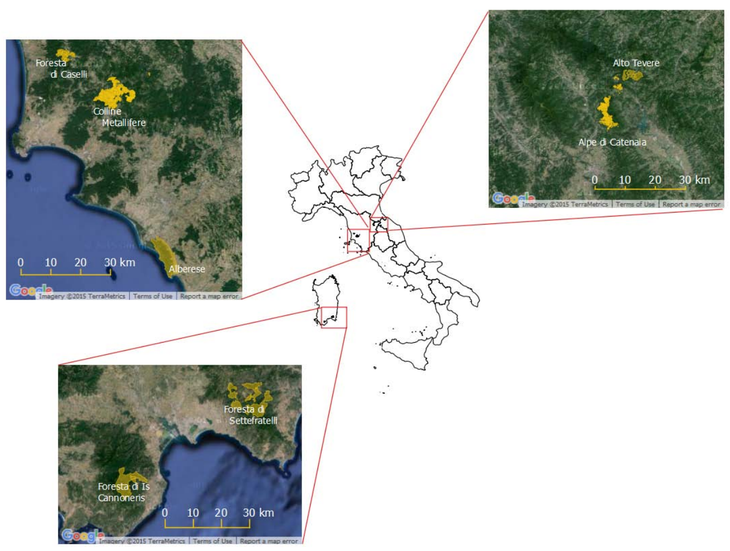
What

Test consolitated and newly established SFM indicators for coppice forests
Demonstrate, by post-hoc and real data, how different management approaches have actually favored/limited the sustainability and efficiency of coppice forests
Improve Sustainable Forest Management (SFM) of coppice forests

How & Where

Network of long-term experimental trials (data series from 10 to 45 years)

- 2 regions: Toscana and Sardegna



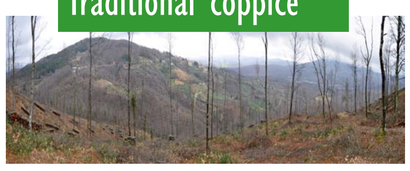
- 3 European Forest Type

Mountainous beech forests - 7.3
Thermophilous deciduous forests - 8.2
Evergreen broadleaved forests - 9.1

- 3 different management options

Natural evolution

Traditional coppice



Conversion to high forest

SFM Indicators

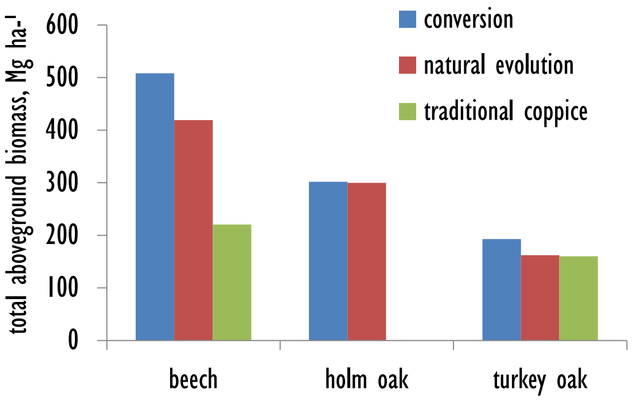
Traditional	Innovative	Innovative	Traditional
Criterion 1 Forest resources			
• Growing stock • Diameter distribution • Carbon stock • Soil carbon	• Total above ground biomass • Growth efficiency	• Higher plant species diversity • Epiphytic lichens • Fungi and mushrooms • Forest breeding birds	• Tree species composition • Introduced tree species • Deadwood • Threatened forest species
Criterion 2 Forest healt			
• Deposition of air pollutants • Soil chemistry • Defoliation • Damage	• Stand growth • Mortality rate • Chlorophyll a fluorescence • Chlorophyll content • Leaf traits	• Overstorey cover • Understorey cover • Ground litter depth • Briophytes cover • Flood retention	
Criterion 3 Productive functions			
	• Increment and fellings • Roundwood • Non-wood goods	• Forest sector workforce • Trade in wood • Energy from wood resources • Accessibility for recreation	• Contribution to GDP and net revenue

Criterion 4 Biodiversity

Criterion 5 Protective functions

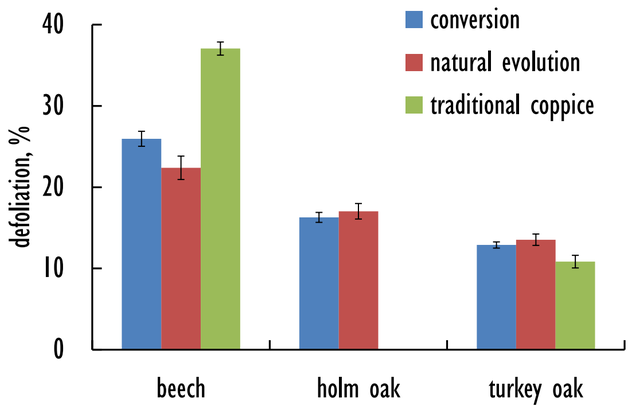
Criterion 6 Socio-economic functions

Preliminary results



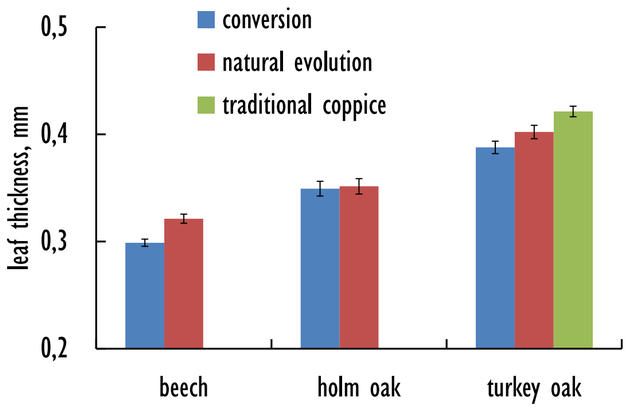
SFM C1 innovative indicator

As for the age-span tested (21-71yrs), the highest value was registered for beech, conversion option. The reduced difference between conversion and natural evolution means the positive growth pattern for the 3 species .



SFM C2 traditional indicator

The absolute highest defo. value was registered for beech, traditional coppice option. For Turkey and holm oak, the managment option doesn't have an effect on tree health status. Bars represent S.E.



SFM C2 innovative indicator

Leaf thickness (LT) seems to be species-specific. Whinin the same species, lower values were for conversion. Coupled with higher defoliation, a reduced LT could suggest a general condition of less resistance to stress factors. Bars represent S.E.

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