

Workshop finale  
del progetto LIFE  
FutureForCoppiceS

Gestione sostenibile dei  
boschi cedui:  
indicazioni per il futuro  
dall'eredità di prove  
sperimentali



Shaping future forestry for sustainable coppices in southern Europe:  
the legacy of past management trials



## SFM and coppice forests: suggestions from LIFE FutureForCoppiceS

## GFS e boschi di origine cedua: quali indicazioni da LIFE FutureForCoppiceS

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REGIONE AUTONOMA DI SARDEGNA  
REGIONE AUTONOMA DELLA SARDEGNA



- Main Deliverables
- Synthesis of the main results and comments
  1. testing, demonstrating and disseminating the **value of SFM indicators** in coppice forests
  2. evaluating the **sustainability of the main management options**
  3. applying results on a broader geographical scale by **simulating management changes** as compared to the current scenario
- Final remarks and suggestions  
(managers and policy makers)



# Main Deliverables



## Report

### Integrated scientific synthesis and evaluation of project results

(available on pen drive  
both in italian and english)

Sintesi scientifica e valutazione integrata  
dei risultati del progetto  
LIFE FutureForCoppiceS –  
Gestione sostenibile dei boschi cedui nel  
sud Europa: indicazioni per il futuro  
dall'eredità di prove sperimentali  
(con Sintesi per gestori e decisori politici)



Marzo, 2019





# Main Deliverables

Further details available from Reports (in italian) on Status and Trends of each SFM Criterion ([www.futureforcoppices.eu](http://www.futureforcoppices.eu))

## 6 REPORTS



- + 1 REPORT on DATABASE
- + 1 REPORT on SPATIAL MODELS at different scales

# Synthesis of the results

## *Constraints and opportunities*



many factors involved



EFTs

SFM Indicators **tested for the first time** within **coppice forests**, so as to assess the sustainability of the system at **stand or management unit level**.



Management options



Experimental plots

A “special chance” offered by the datasets of variables monitored **over the last 40 years** (45 plots) besides the new ones.



SFM Criteria

Responses both of consolidated (12) and new (26) SFM Indicators.



SFM Indicators

Represent a very **challenging task** but also a **big opportunity**  
Multidisciplinary approach: **42 experts in 8 different disciplines**

## Data organised in the LIFE FutureForCoppiceS database compatible with European Forest Data Centre (EFDAC) and with the Forest Information System for Europe (FISE)



TI TROVI NELLA SEZIONE: DATABASE

[Indietro](#)

Questa tabella riporta i dati di alcuni tra gli indicatori consolidati e innovativi di gestione sostenibile (SFM) riferiti al Criterio 1 (Carbonio) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard per le diverse specie arboree e le principali opzione selvicolturali testate. Tra gli indicatori correntemente utilizzati per valutare il contributo considerati il valore della massa in piedi (Growing stock,  $m^3 \cdot ha^{-1}$ ), lo stock di C nella massa in piedi (C stock,  $Mg \cdot ha^{-1}$ ) e il contenuto g  $Kg^{-1}$ ). Tra gli indicatori innovativi testati sono riportati i valori della massa arborea epigaea totale (Total aboveground tree biomass (Growth Efficiency) calcolata come rapporto tra l'incremento corrente di biomassa e LAI o lettiera.

SFM Criterion 1		Fagus sylvatica management option			Quercus cerris management option		
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	traditional coppice
Growing_Stock [ $m^3 \cdot ha^{-1}$ ]	consolidated	366.7 ± 38.8	502.2	101.6 ± 27.7	283.5 ± 73.5	357.5 ± 98.1	17.7
Carbon_Stock [ $Mg \cdot ha^{-1}$ ]	consolidated	152.1 ± 16.1	209.6	42.1 ± 11.5	120.3 ± 31.1	151.7 ± 41.6	7.1
Soil_Organic_C_Content [g $Kg^{-1}$ ]	consolidated	29.5 ± 6.8	28.8	32.0 ± 6.5	24.3 ± 5.0	27.8 ± 6.6	23.1
Total_Above_Ground_Tree_Biomass [ $Mg \cdot ha^{-1}$ ]	new	477.8 ± 73.4	419.1	220.4 ± 21.9	362.5 ± 68.3	303.4 ± 83.2	160.1
Growth_Efficiency_LAI	new	2.2	2.5	-	0.6	-	
Growth_Efficiency_Litter	new	3.2	2.7	-	4 ± 2.4	1.6 ± 0.7	

Questa tabella riporta i dati di alcuni tra gli indicatori consolidati e innovativi di gestione sostenibile (SFM) riferiti al Criterio 2 (Mantenimento della salute e vitalità degli ecosistemi forestali) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard (ove disponibili) per le diverse specie arboree e le principali opzione selvicolturali testate.

Tra gli indicatori correntemente utilizzati per valutare lo stato di salute e vitalità dell'ecosistema foresta sono stati considerati la defogliazione (Defoliation, %), l'acidità del suolo (Soil\_PH\_0-10) ed il contenuto di carbonio organico (Soil\_organic\_C\_0-10) nei primi 10 cm di spessore. Tra gli indicatori innovativi testati sono riportati i valori del

SFM Criterion 2		Fagus sylvatica management option			Quercus cerris management option			Quercus ilex management option		
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	traditional coppice	conversion	natural evolution	
Defoliation (%)	consolidated	25.7 ± 1.8	22.4	37.5 ± 3.5	12.6 ± 3.1	12.9 ± 1.8	11.0 ± 1.7	16.4 ± 4.2	15.7 ± 3.3	
Soil_PH_0-10 [m]	consolidated	4.9 ± 0.1	5.2	4.6 ± 0.2	5.8 ± 0.9	5.8 ± 0.9	6.1 ± 0.9	5.8 ± 0.4	6.0 ± 0.6	
Soil_Organic_C_0-10 [cm]	consolidated	43.4 ± 9.7	43.0	47.4 ± 22.0	44.6 ± 12.1	53.7 ± 15.0	46.0 ± 4.2	66.9 ± 13.7	58.3 ± 11.2	
Leaf_CH3SPAO [seed]	new	36.1 ± 1.4	37.5	-	41.5	30.8	41.5 ± 0.6	46.7 ± 1.3	48.6 ± 0.1	
Leaf_In thickness [mm]	new	0.30 ± 0.01	0.33	-	0.39	0.38	0.42 ± 0.05	0.35 ± 0.11	0.35 ± 0.10	
PWPM	new	0.83 ± 0.01	0.83	-	0.83	0.83	0.83 ± 0.01	0.83	0.78	

Questa tabella riporta i dati degli indicatori innovativi di gestione sostenibile (SFM) riferiti al Criterio 3 (Funzioni produttive nelle foreste, prodotti legnosi e non legnosi) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard (ove disponibili) per le diverse specie arboree e le principali opzione selvicolturali testate.

Tra gli indicatori innovativi testati a scala di popolamento forestale sono riportati il valore del rapporto tra incrementi e prelievi legnosi (Increment and fellings, %), la quantità di legno tondo ricavabile (Roundwood,  $m^3 \cdot ha^{-1}$ ) e il valore di mercato dei funghi edibili (Marketed Mushrooms Production, €  $ha^{-1}$ ).

SFM Criterion 3		Fagus sylvatica management option			Quercus cerris management option			Quercus ilex management option		
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	traditional coppice	conversion	natural evolution	
Increment_and_Fellings [%]	new	46.0 ± 3.8	-	-	64.5 ± 7.5	50.8 ± 21.6	-	90.4 ± 6.2	105.1 ± 11.2	
Roundwood[m³ ha⁻¹]	new	261.1 ± 24.1	-	-	164.1 ± 15.5	158.7 ± 54.1	-	171.9 ± 22.7	211.8 ± 25.9	
Marketed_Mushrooms_Production [€ ha⁻¹]	new	59.8 ± 7.4	0.0	-	4.4	17.2	131.5 ± 40.4	297.1 ± 28.6	0.0	

Questa tabella riporta i dati degli indicatori tradizionali ed innovativi di gestione forestale sostenibile (SFM) riferiti al Criterio 4 (Diversità biologica negli ecosistemi forestali) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS.

SFM Criterion 4		Fagus sylvatica management option			Quercus cerris management option			Quercus ilex management option		
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	traditional coppice	conversion	natural evolution	
Edible_Mushrooms_Species_Richness [n]	new	2.25 ± 0.46	0.0	-	2.00	1.00	-	9.67 ± 7.71	0.83 ± 0.75	0.0
Edible_Mushrooms_Species_Biomass [kg]	new	10.04 ± 14.96	-	-	3.87	18.41	-	16.15 ± 13.57	0.01 ± 0.97	0.0
Standing_Deadwood_Volume [m³]	consolidated	-	65.65 ±	-	-	25.70 ± 7.53	-	-	-	35.51
Lying_Deadwood_Volume [m³]	consolidated	-	27.61 ±	-	-	44.77 ± 10.76	-	-	-	13.05
Lichen_Richness [%]	new	3.00 ± 0.50	4.00 ±	-	8.00	5.00	-	9.67 ± 5.17	4.27 ± 2.79	2.00 ± 2.00
Native_Herb_Species_Richness [n]	new	5.25 ± 0.47	10.0 ±	-	24.00	26.00	-	24.00 ± 1.53	16.00 ± 18.34	5.00 ± 3.17
Forest_Soil_Species_Richness [n]	new	-	2.00	1.00	-	9.00	12.00	14.00 ± 1.41	3.00 ± 0.89	2.33 ± 0.98
Woody_species_richness [n]	consolidated	1.30 ± 0.52	2.00	1.00 ± 0.00	2.50 ± 1.17	2.30 ± 1.03	-	1.50 ± 0.71	1.40 ± 0.53	2.40 ± 0.55
Wood_Decaying_Fungi_Richness [n]	new	9.50 ± 2.38	15.00	-	10.00	13.00	-	7.50 ± 2.12	3.50 ± 1.76	4.00 ± 2.00

Questa tabella riporta i dati di alcuni tra gli indicatori consolidati e innovativi di gestione sostenibile (SFM) riferiti al Criterio 2 (Mantenimento della salute e vitalità degli ecosistemi forestali) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard (ove disponibili) per le diverse specie arboree e le principali opzione selvicolturali testate.

Tra gli indicatori correntemente utilizzati per valutare lo stato di salute e vitalità dell'ecosistema foresta sono stati considerati la defogliazione (Defoliation, %), l'acidità del suolo (Soil\_PH\_0-10) ed il contenuto di carbonio organico (Soil\_organic\_C\_0-10) nei primi 10 cm di spessore. Tra gli indicatori innovativi testati sono riportati i valori del



# Main Deliverables

contains over 42,000 data records

- ✓ free access to 6 summary tables, one for each Criterion, with consolidated and new SFM Indicators, divided by forest types and management options;
- ✓ access through accreditation to consult and request specific data sets.



TI TROVI NELLA SEZIONE: DATABASE



[Indietro](#)

Questa tabella riporta i dati di alcuni tra gli indicatori consolidati e innovativi di gestione sostenibile (SFM) riferito Carbonio) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie diverse specie arboree e le principali opzione selvicolturali testate. Tra gli indicatori correntemente utilizzati per considerati il valore della massa in piedi (Growing stock,  $m^3\text{ha}^{-1}$ ), lo stock di C nella massa in piedi (C stock,  $Mg\text{Kg}^{-1}$ ). Tra gli indicatori innovativi testati sono riportati i valori della massa arborea epigea totale (Total above-Growth Efficiency) calcolata come rapporto tra l'incremento corrente di biomassa e LAI o lettiera.

SFM Criterion 1		Fagus sylvatica management option			Quercus manage	
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural ev
Growing_Stock [ $m^3\text{ha}^{-1}$ ]	consolidated	366.7 ±38.8		502.2	101.6 ±27.7	283.5 ±73.5
Carbon_Stock [ $Mg\text{ ha}^{-1}$ ]	consolidated	152.1 ±16.1		209.6	42.1 ±11.5	120.3 ±31.1
Soil_Organic_C_Content [ $\text{g Kg}^{-1}$ ]	consolidated	29.5 ±6.8		28.8	32.0 ±6.5	24.3 ±5.0
Total_Above_Ground_Tree_Biomass [ $Mg\text{ ha}^{-1}$ ]	new	477.8 ±73.4		419.1	220.4 ±21.9	362.5 ±68.3
Growth_Efficiency_LAI	new	2.2		2.5	-	0.6
Growth_Efficiency_Litter	new	3.2		2.7	-	4 ±2.4

Questa tabella riporta i dati di alcuni tra gli indicatori consolidati e innovativi di gestione sostenibile (SFM) riferiti ecosistemi forestali) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard (ove disponibili) per le diverse specie arboree e le principali opzione selvicolturali testate.

Tra gli indicatori correntemente utilizzati per valutare lo stato di salute e vitalità dell'ecosistema foresta sono stati considerati la defogliazione (Defoliation, %), l'acidità del suolo ( $\text{Soil\_pH}_{0-10}$ ) ed il contenuto di carbonio organico ( $\text{Soil\_organic\_C}_{0-10}$ ) nei primi 10 cm di spessore. Tra gli indicatori innovativi testati sono riportati i valori del

SFM Criterion 2		Fagus sylvatica management option			Quercus cerris management option		Quercus ilex management option	
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	conversion	natural evolution
Defoliation [%]	consolidated	25.7 ±1.8		22.4	37.5 ±3.5	12.6 ±3.1	12.9 ±1.8	11.0 ±1.7
Soil_pH_0-10 [cm]	consolidated	4.9 ±0.1		5.2	4.6 ±0.2	5.8 ±0.9	5.8 ±0.9	6.1 ±0.9
Soil_organic_C_0-10 [cm]	consolidated	43.4 ±9.7		43.0	47.4 ±22.0	44.6 ±12.1	53.7 ±15.0	46.8 ±4.2
Leaf_CH4_FPAO [soil]	new	36.1 ±1.4		37.5	-	41.5	38.8	41.5 ±0.6
Leaf_thickness [mm]	new	0.30 ±0.01		0.33	-	0.39	0.38	0.42 ±0.00
PuPm	new	0.63 ±0.01		0.63	-	0.83	0.63	0.93 ±0.01

Questa tabella riporta i dati degli indicatori innovativi di gestione sostenibile (SFM) riferiti al Criterion 3 (Funzioni produttive nelle foreste, prodotti legnosi e non legnosi) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS. I valori rappresentano le medie calcolate e deviazioni standard (ove disponibili) per le diverse specie arboree e le principali opzione selvicolturali testate.

Tra gli indicatori innovativi testati a scala di popolamento forestale sono riportati il valore del rapporto tra incremento e prelievi legnosi (increment and fellings, %), la quantità di legno riconvinto (Roundwood,  $m^3\text{ ha}^{-1}$ ) e il valore di mercato dei funghi edibili (Marketed Mushrooms Production, € ha $^{-1}$ ).

SFM Criterion 3		Fagus sylvatica management option			Quercus cerris management option		Quercus ilex management option	
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	conversion	natural evolution
Increment_and_Fellings [%]	new	46.0 ±3.8			64.5 ±7.5	50.9 ±21.6	-	90.4 ±6.2
Roundwood[m³ ha⁻¹]	new	20.1 ±24.1		-	164.1 ±19.5	150.7 ±54.1	-	171.0 ±22.7
Marketed_Mushrooms_Production[€ ha⁻¹]	new	59.8 ±74.7		0.0	-	4.4	17.2	131.5 ±24.0

Questa tabella riporta i dati dei 9 indicatori tradizionali ed innovativi di gestione forestale sostenibile (SFM) riferiti al Criterion 4 (Diversità biologica negli ecosistemi forestali) misurati nelle aree di studio del progetto LIFE FutureForCoppiceS.

SFM Criterion 4		Fagus sylvatica management option			Quercus cerris management option		Quercus ilex management option	
Indicator	Type	conversion	natural evolution	traditional coppice	conversion	natural evolution	conversion	natural evolution
Edible_Mushrooms_Species_Richness [n]	new	2.25 ±0.96		-	2.00	1.00	4.50 ±0.71	0.83 ±0.75
Edible_Mushrooms_Species_Biomass [n]	new	10.04 ±14.98		-	3.87	18.41	16.15 ±6.13	13.57 ±0.97
Standing_Deadwood_Volume	consolidated	-	65.65 ±	-	-	25.70 ±7.53	-	-
Lyming_Deadwood_Volume	consolidated	-	27.61 ±	-	-	44.77 ±10.76	-	-
Living_Deadwood_Volume	new	3.00 ±0.82	2.78 ±	-	8.00	1.00	9.00	5.17 ±2.79
Native_Herb_Species_Richness [n]	new	5.25 ±4.57	1.00 ±	-	24.00	26.00	25.50 ±3.53	16.17 ±8.34
Forest_Herb_Species_Richness [n]	new	2.00	1.00	-	9.00	12.00	14.00 ±1.41	3.00 ±0.89
Woody_species_Richness [n]	consolidated	1.30 ±0.52	2.00	1.00 ±0.00	2.50 ±1.17	2.30 ±1.03	1.50 ±0.71	1.40 ±0.53
Wood_Decaying_Fungi_Richness [n]	new	9.50 ±2.38	15.00	-	10.00	13.00	7.50 ±2.12	3.50 ±1.76

# Results - SFM Criteria and Indicators

## FOREST RESOURCES AND GLOBAL CARBON CYCLES

Growing stock		Growth efficiency
Diameter distribution		Total above ground tree biomass
Carbon stock		

## FOREST ECOSYSTEM HEALTH AND VITALITY

Soil condition		Chlorophyll content
Defoliation		Leaf traits   Chlorophyll a fluorescence

- Most (26 out of 38) of the tested **SFM Indicators** turned out to be **appropriate** (9 consolidated, 17 new) in evaluating sustainability in coppice forests at stand/management unit level.

- Among them, the following ones are highly recommended for their informative power:  
Carbon Stock, Growing Stock, Total Above Ground Tree Biomass, Understorey cover, Net revenue, Energy and Recreation.

Overstorey cover
Understorey cover

## SOCIO-ECONOMIC FUNCTIONS

Contribution of forest sector to GDP		Energy from wood resources*   Recreation*
Net revenue		Trade in wood*   Work force*



# SFM Criteria and Indicators - Comments



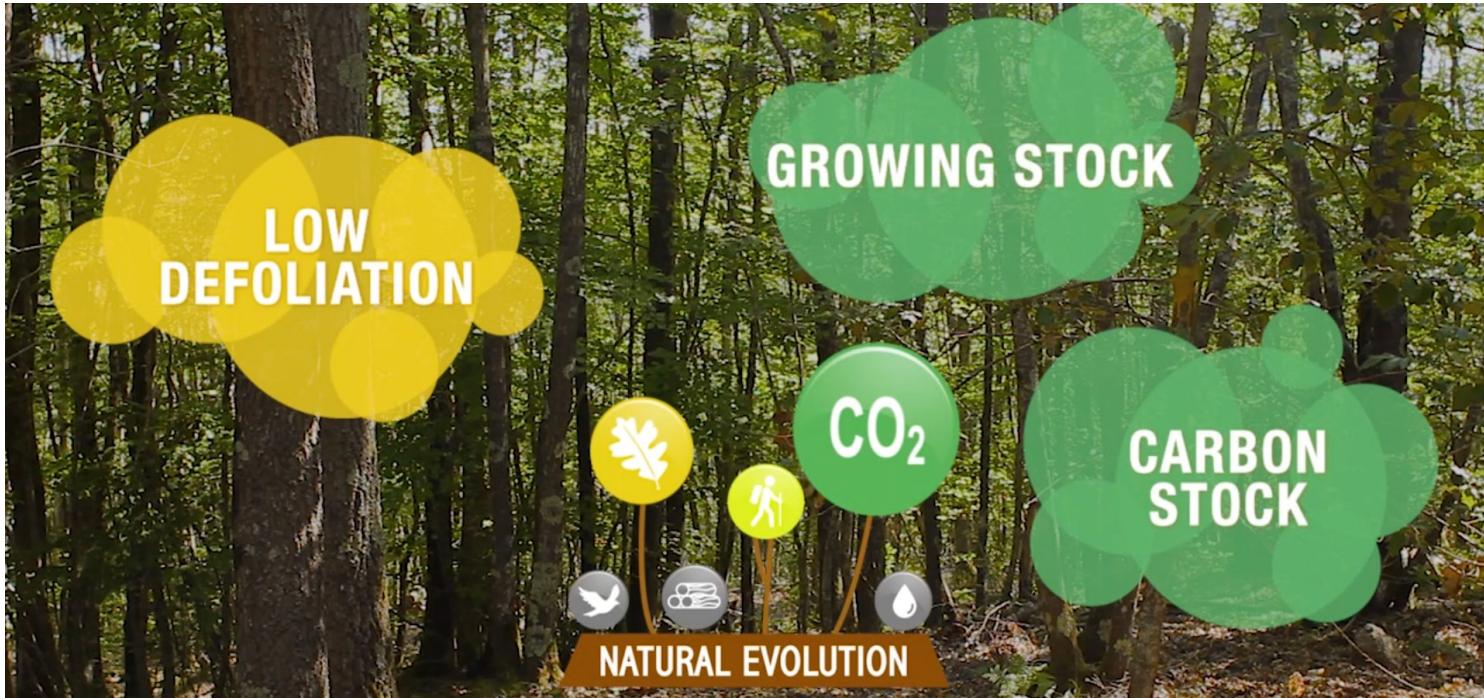
- SFM Indicators applied to stand/management unit level made it possible to perform cross-comparisons of the **different management options** on the floor, highlighting which of them could meet the awaited goals.
- The availability of **appropriate SFM Indicators** at stand level contributes to **certify sustainability starting from the management unit** up to the forest and landscape level, working at a **complementary level** as compared to the official one.

# Results - Sustainability of different management options



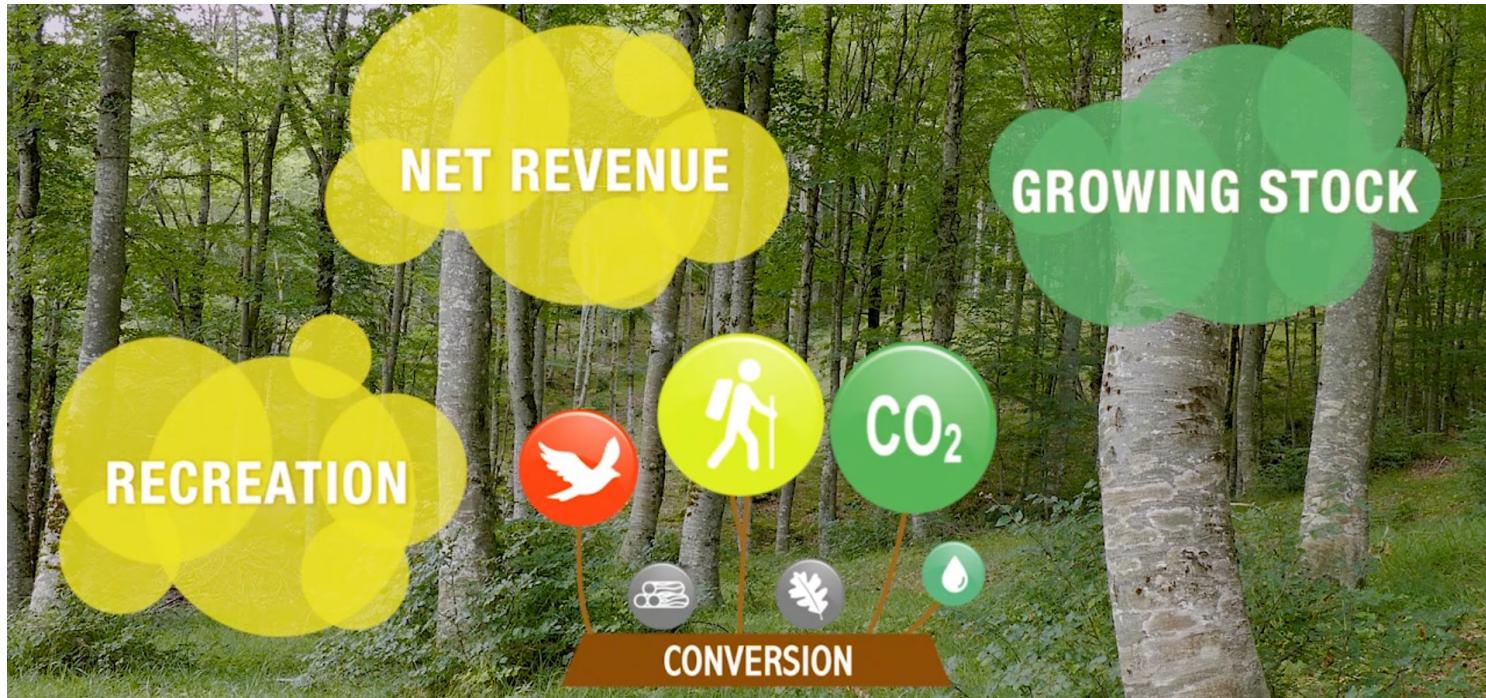
**Traditional coppice** promotes **wood production** and the **socio-economic aspects**, as highlighted by the high values of i) harvested mass/increment ratio and roundwood, ii) non-wood products, iii) net revenue. On the other hand, the standing biomass and carbon stock are reduced and vitality is lower (only in the beech case-study).

# Results - Sustainability of different management options



The natural evolution supports the **carbon cycle, forest health and vitality**, as confirmed by the high standing biomass and carbon stock, and the reduced defoliation and damages (beech). Socio-economic issues are on the contrary negatively affected due to a low recreational value, no income and no energy recovery in the absence of harvesting.

# Results - Sustainability of different management options



**Conversion to high forest**, that combines high standing biomass and periodical harvesting, shows positive effects on **environmental issues** (biodiversity, energy from residuals) and **socio- economic aspects** (net revenue). The **recreational issues** are especially favoured.



# Sustainability of different management options - Comments



- Some SFM Criteria and Indicators turned out **not to be significantly different** among the **three management options**.
- In some cases the Indicators' pattern hasn't been affected **at now** by the **different applied management options** or is still affected by the **former coppicing cycles**.
- In neither case this prevent the possibility of **future divergent patterns**, this suggesting the **interest** towards their **monitoring** in relation to SFM implementation.



# Results - Management options and possible Scenarios



**Decreasing coppice forests exploitation** – a trend which involves an important part of Italian and European coppice forests (aged coppices, coppice under natural evolution...)- produced:

- **positive effects** on the enhancement of forest contribution to global carbon cycles (**Criterion 1**, Growing stock and Carbon stock) and of forest health and vitality (**Criterion 2**, Defoliation);
- **lower performances** for the productive functions of forests (**Criterion 3**, Increment and Fellings) and for the socio-economic (**Criterion 6**, Net revenue, Energy from wood).



# Results - Management options and possible Scenarios



An **increase in forest exploitation**, by means **both of coppicing and coppice conversion** to high forest

- enhanced the productive functions of forests (**Criterion 3**, Increment and Fellings) and the socio-economic ones (**Criterion 6**, Net Revenue and Energy from wood);
- **lower performances** were recorded as regards forest contribution to global carbon cycles (**Criterion 1**, Growing stock and Carbon stock). The decrease **was slight** (-2%), taking into account not only the standing biomass but also the one removed by forest exploitations, as highlighted by the **new indicator Total above ground tree biomass**.



# Management options and possible Scenarios - Comments



- Changes in management options (**Scenarios**) were simulated with respect to the **current management status** (Scenario 1 - *status quo*).
- They take care of **different ecological peculiarities** of each tree species -**beech, Turkey oak and holm oak**- which are spreaded on large extent in Southern Europe, under coppice system especially.
- The three management options (coppicing, natural evolution, conversion to high forest) are the main ones adopted in coppice forests in Southern Europe.



# Management options and possible Scenarios - Comments



- They were elaborated according with the principles of **practicability and caution**: the percentages of areas affected by changes, both towards increasing or decreasing rates of management, **didn't exceed the 8.5%** of the total surface of the forest categories considered.
- Although with a **precautionary approach**, the results issued from LIFE FutureForCoppiceS, may be of **interest also to a broader scale** (Southern Europe).



# Final remarks and suggestions

Project highlights	Recommendations
<p>SFM Indicators are reliable tool to evaluate <b>coppice forest sustainability</b>, even at <b>stand/management unit</b> level too.</p> <p>Among the 38 tested indicators, <b>26 indicators</b> turned out to be <b>appropriate</b>.</p>	<p><b><i>The adoption of SFM Indicators, both consolidated and new ones, is highly recommended in planning and evaluating coppice forest sustainability and in SFM reporting.</i></b></p>

# Final remarks and suggestions

Project highlights	<i>Recommendations</i>
<ul style="list-style-type: none"> <li>• Traditional coppice enhanced the productive and the socio-economic functions;</li> <li>• Coppice under <b>natural evolution</b> showed a positive environmental impact (carbon cycle);</li> <li>• Conversion to <b>high forest</b> promoted <b>both environmental</b> (carbon stock, biodiversity, energy from forest waste) <b>and socio-economic</b> functions.</li> </ul>	<p><i>As regard <b>overall sustainability, the coexistence and contiguosness of all different coppice management options</b> is a highly recommended solution especially with respect to climate changes.</i></p>

# Final remarks and suggestions



## Project highlights

Each management option, addressed within the framework of the project, promotes different expressions of sustainability and at different degree.

# Final remarks and suggestions



## **Recommendations**

***The relative importance of the different management options should be carefully evaluated and planned, from local up to regional scale, depending on the specific socio-economic and environmental conditions.***



## Forestas

Agenzia forestale regionale pro s'isvilupu de su territoriu e de s'ambiente de sa Sardegna  
Agenzia forestale regionale per lo sviluppo del territorio e dell'ambiente della Sardegna



GESTIONE SOSTENIBILE DEI BOSCHI CEDUI NEL SUD EUROPA: INDICAZIONI PER IL FUTURO DALL'EREDITÀ DI PROVE Sperimentali.

Maggiori info >>>



[www.futureforcoppices.eu](http://www.futureforcoppices.eu)



# Thanks for your attention



LIFE FutureForCoppiceS

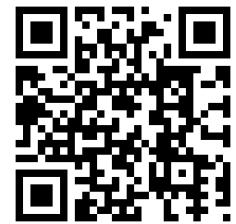
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IL PROGETTO CRITERI ED INDICATORI PRODOTTI NETWORKING PROGRAMMA LIFE

GESTIONE SOSTENIBILE DEI BOSCHI CEDUI NEL SUD EUROPA: INDICAZIONI PER IL FUTURO DALL'EREDITÀ DI PROVE Sperimentali.

Maggiori info >>>

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