

**Interreg
Europe**



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Seminario tematico per lo scambio di esperienze

Esperienze dal primo incontro tematico



Online, 10 luglio 2023

- 1. Finland - Central Finland region**
- 2. Poland - Świętokrzyskie Region**
- 3. France - Auvergne-Rhône-Alpes**
- 4. Spain - Andalusia**
- 5. Conclusion**

Regional Forest Program

- **Finnish forest center, together with the regional forest councils, is responsible for creating a strategic forest program for the region.**
- **The objectives of the regional forest programs arise from the regions' own development needs and the objectives of the national forest strategy.**
- **The programs combine economic, ecological, social, and cultural objectives.**



Main objective is the diverse and sustainable use of forests. Central Finland's regional forest program has six main goals:

1. **Growing and vigorous forests**
2. **Increased biodiversity and water protection**
3. **Climate-sustainable forests**
4. **Infra supporting versatile use of forests**
5. **RDI in wood-based products**
6. **Nature-based possibilities from forests**

Climate-sustainable forests (target 3)

- **Diversification of the forest management practices, with the special focus on continuous-cover silviculture in peatlands.**
- **Carbon storages are increased by fertilization.**
- **Earning mechanisms in voluntary carbon emission compensation are developed.**

Using ash to fertilize peatland forests is one of the most rapid methods of improving forest growth

Improving the growth of peatland forests and especially the maintenance of soil health is of importance because these forests are so extensive.



Small-scale Retention Programme in Forests

the main objective

- counteracting the effects of climate change in forests

specific objectives

- drought prevention
- flood prevention
- restoration of wetland habitats
- carbon retention in peatland ecosystems
- natural water filtration
- protection of rare species
- creating waterholes for animals



Small-scale retention object in Barycz Forest District
(water reservoir located in a swampy valley)

- **7 Forest Districts in Świętokrzyskie Region**
- **Timescale 2007-2022**
- **EU funds and State Forests funds invested in the programme (60% EU funds)**
- **Total cost of programme – 246 670 000 PLN (55 000 000 EUR)**
- **Operation of the programme by employees of 7 Forest Districts and coordinator in Regional Directorate in Radom**
- **Field work performed by external companies (natural materials used for construction)**



Small-scale retention object in Daleszyce Forest District
(newly created water reservoir in forest area)

- **43 newly created water reservoirs**
- **61 new dams and other water storage facilities**
- **1,1 milion cubic metres of water retained**
- **Increase in biodiversity**
- **Increase in the water level around small retention facilities**

- **Comprehensive project to protect species and natural habitats in areas managed by the State Forests (2017-2023)**



Improvement of the condition of natural habitats (approximately 100 hectares in Regional Directorate of State Forests in Radom)

- **Restoring functions and improving hydrogenic habitats in areas managed by the State Forests (2023-2029)**



Approximately 7000 hectares in Regional Directorate of State Forests in Radom pre-qualified for the project

Carbon compensation in forests through labelled projects



Le premier cadre de certification climatique volontaire de l'Etat en France qui valorise les projets visant à réduire les émissions et séquestrer du carbone

→ *The Label Bas Carbone is launched but requires rules to exist*

The decree 2018-1043 launched the Label Bas Carbone in 2018. The following rules are established for the labelled projects that must be

- Measurable
- Verifiable
- Lasting
- Additional
- Unique

The three types of methodologies

Afforestation

- *On a land that was not a forest previously*
- *The project lasts 30 years*

Restoration of damaged forest stands

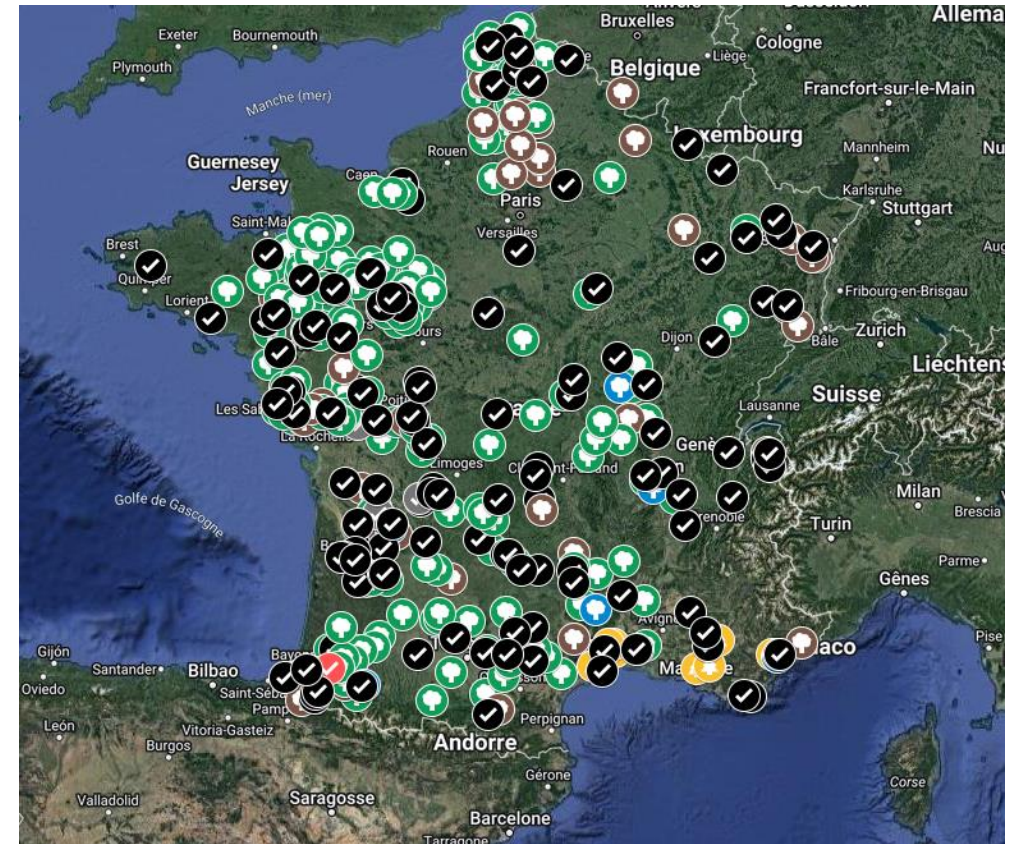
- *On a land that suffered a disaster in the 5 previous years : storm, wildfire...*
- *The biodiversity is diagnosed*

Conversion of coppice to high-forest stands

- *Young stands are selected to enable a safer growing of the remaining trees*
- *The project lasts 30 years*



- Since the launch of the three methodologies in 2019:
 - 1800 ha of land were afforested
 - 2300 ha of degraded forests were restored
- Credits are sold at a **higher price** when they are forest projects of the Label Bas Carbone
- Forest projects are financed at **63%** by the Label Bas Carbone in average
- In 2021, the projects cumulated **252 207 tCO₂eq** of potential reduction of emissions



Map of the Label Bas Carbone projects for the methodologies of the CNPF

- Green : afforestation projects
- Blue : restoration projects
- Brown : conversion of coppice
- Black : projects already conducted

PROJECTS

1. Standard procedure for Carbon credits certification
2. Calculator and Methodology for CO₂ sequestration
3. Catalogue of sequestration projects
4. Other: support documents



Establishes the requirements for **verification**, **certification** and **auditing**, as well as the requirements for a project to be considered blue carbon sequestration:

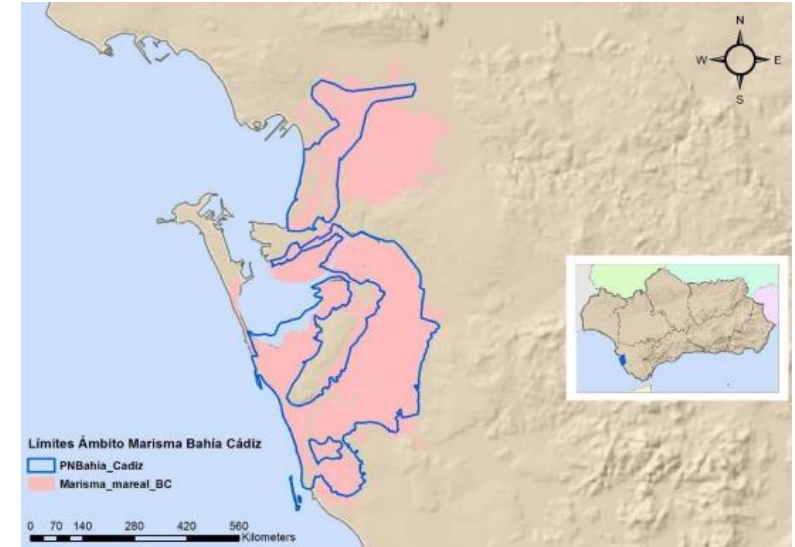
- Endorsed by the Public Administration
- Allows a Public Administration to certify blue carbon credits under a standard
- Offers guarantees of replicability at international level

Estándar andaluz de carbono para la certificación de créditos de carbono azul

Noviembre 2021



Carbon flux in Cadiz salt marshes

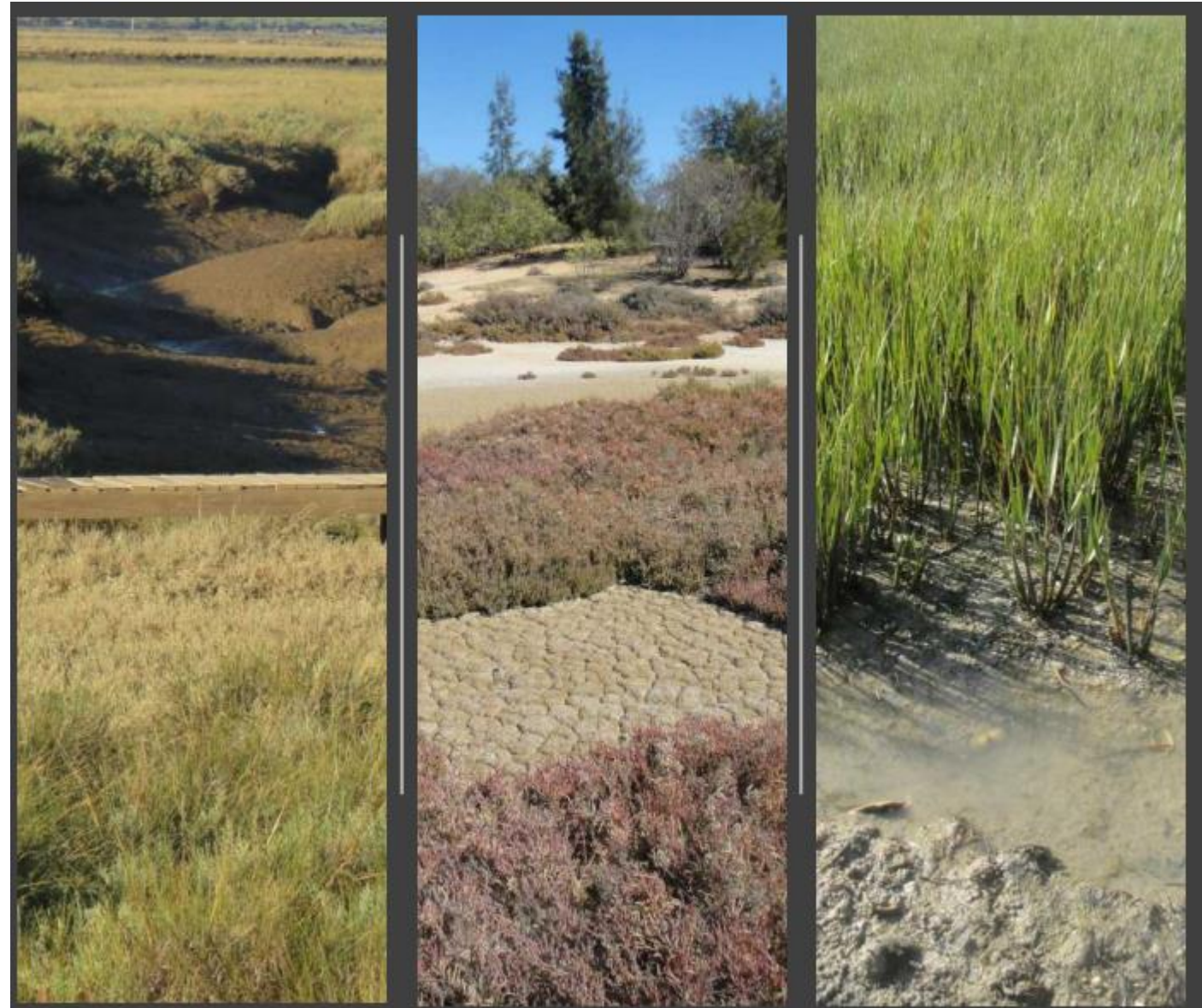


Transformation for salt production began with the Romans, but in recent years has declined. Once up-keep of seawalls stops, nature begins to shape the marsh again



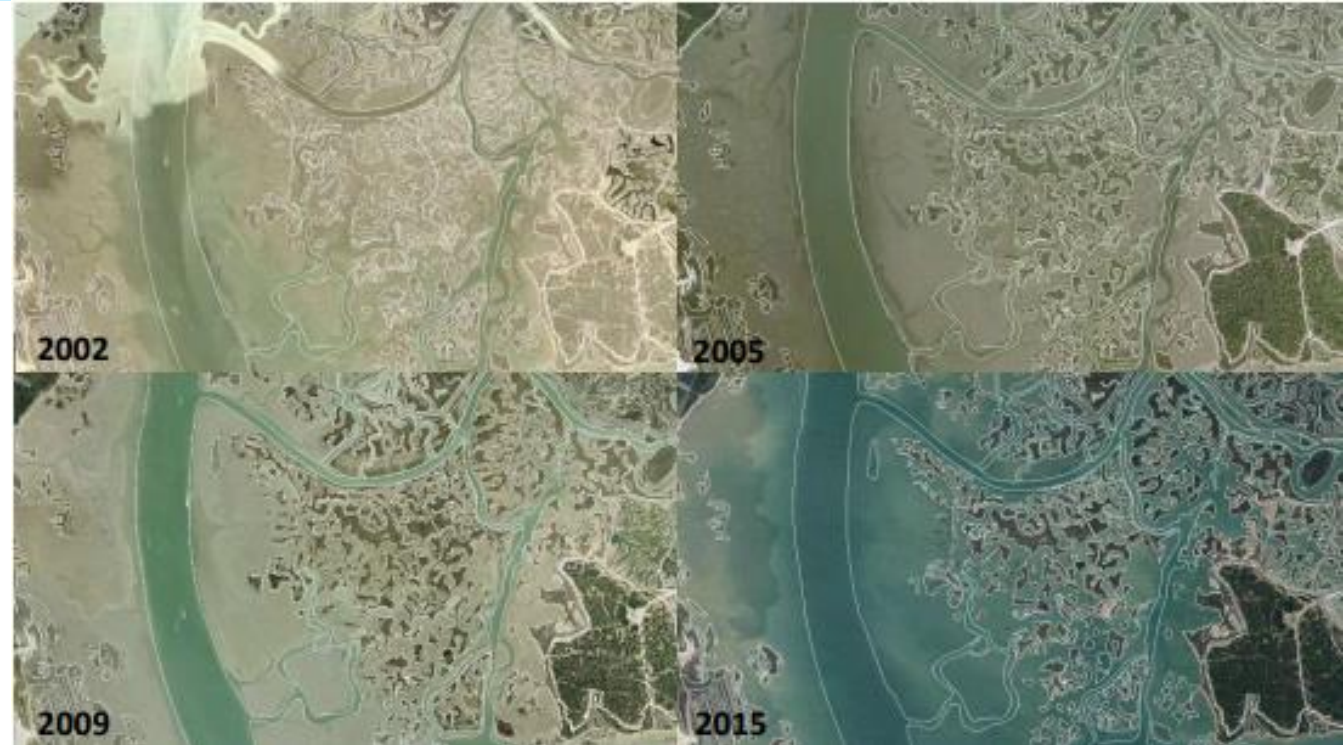
The project has two main objectives:

- **To restore biodiversity**
- **To increment the carbon stock**



Restore biodiversity

By demolishing the walls of the old salt pans they restored the water flows for the natural recolonization of the vegetation



Carbon fluxes

- **Measures of carbon in soil**
- **Measure of carbon in emerged and submerged vegetation**
- **Development of a methodology for carbon fluxes accounting in salt marshes**



GUIDELINE

The tool estimates, using data from LIFE BlueNatura and bibliography, the value of the different carbon sinks, and calculates the total amount of stocks at the baseline (ex ante) and at the end of the project (ex post)

CALCULADORA DE ABSORCIONES EX ANTE DE DIÓXIDO DE CARBONO EN DE FANERÓGAMAS MARINAS Y MARISMAS MAREALES V.1

CONTENIDO

1. DATOS GENERALES DEL PROYECTO
2. CALCULADORAS ESCENARIO BASE
3. RESULTADOS ESCENARIO BASE
4. CALCULADORAS ESCENARIO PROYECTO
5. RESULTADOS ESCENARIO PROYECTO
6. RESUMEN DE ABSORCIONES
7. BASE DE DATOS DE FANERÓGAMAS
8. BASE DE DATOS DE MARISMAS
9. FACTORES DE EMISIÓN COMBUSTIBLES
10. FORMAS CALCULADORA

Este herramienta se ha desarrollado en el marco del Proyecto LIFE BlueNatura.

Sociedad científicas:

- Junta de Andalucía, Agencia de Medio Ambiente y Agua (AMAA)
- Consejo Superior de Investigaciones Científicas (CSIC)
- Unión Internacional para la Conservación de la Naturaleza (IUCN)
- Montaña y Territorio (M y T)

Co-financiación:

- Fundación cepa

INTRODUCCIÓN PARA LA COMPLEMENTACIÓN DEL FORMULARIO Y USO DE LA CALCULADORA:

En cada una de las calculadoras está diseñado que debe ser introducido y las unidades en las que debe hacerse. Información adicional puede obtenerse clicando sobre la ayuda.

Se incluyen tres bases de datos, una para fanerógamas marinas, otra para marismas y otra para los factores de emisión del combustible, que deberán ser utilizadas para localizar los datos requeridos en las distintas secciones. Valores negativos indican emisiones de CO₂ a la atmósfera, mientras que valores positivos indican capturas de CO₂ en el secuestro. Para más detalles con respecto al uso de la calculadora, está disponible un documento de ayuda.

Documento de ayuda a la herramienta de cálculo de absorciones de dióxido de carbono en praderas de fanerógamas marinas y marisma mareales

Noviembre 2021

- *Le esperienze riguardano sia strumenti amministrativi / gestionali, sia approcci scientifici, sia realizzazioni pratiche*
- *Punti di partenza e approcci differenti per raggiungere l'obiettivo di assorbimento del carbonio*
- *Filo conduttore comune: la qualità degli ambienti naturali è un fattore determinante per ottimizzare l'assorbimento del carbonio*

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Buone pratiche delle Marche: la Valutazione Ecologica Compensativa



Online, 10 luglio 2023

1. Background

2. Legal framework

3. Objectives

4. Implementation

5. Challenges & Lessons learned

6. Results achieved

Environmental evaluation and compensation

- **The realization of project or the planning of land use can imply transformation in soil use, with removal or damage to natural systems, and the consequent reduction in carbon absorption**
- **Environmental evaluations are the tools to assess the potential damage preliminary to the realization of the transformation and to identify adequate compensation measure**



Mechanism for environmental compensation

- 1. The National Act D.lgs 152/2006 (environmental law): compensation in strategic environmental assessment and environmental impact assessment procedures**
- 2. Regional law n. 11/2019: application of the D.lgs 152/2006 at regional level.**
- 3. Regional law n. 71/1997; mechanisms for compensation of forests (in mining activities).**
- 4. Regional law n. 6/2005 (forest law) introduces the obligation of compensation in case of reduction of forest surface.**



Compensating the ecological value

Limitazioni dell'applicazione della legge forestale alle valutazioni ambientali:

- **Si applica solo alle superfici boscate;**
- **Prevede la creazione di nuove superfici boscate**
- **Prevede la possibilità di indennizzo economico**

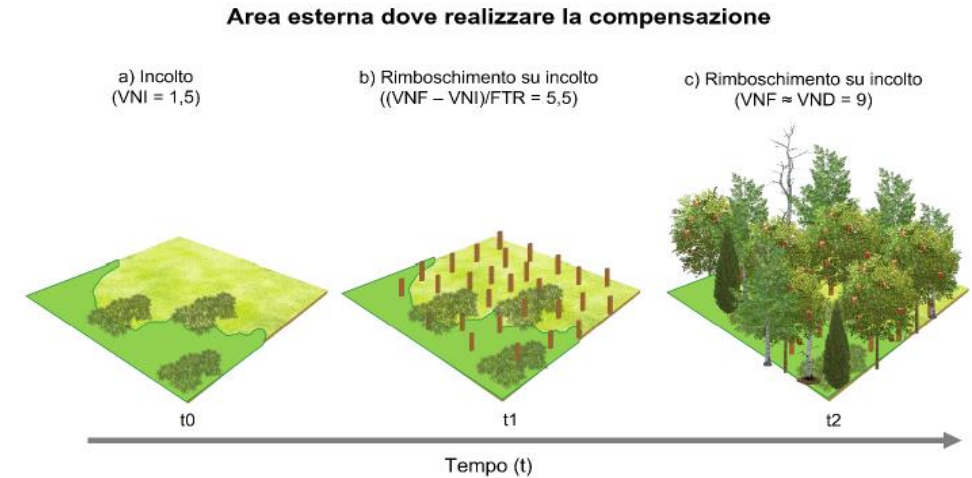
Possibile soluzione: introdurre un meccanismo che quantifichi la compensazione in termini di “Valore Ecologico”, non solo per i boschi, ma ogni qualvolta si abbia una riduzione o danneggiamento di una superficie naturale



Implementation

Compensative Ecological Evaluation

- **A methodology for the quantification of the compensation based on ecologic value (VEC – Valutazione Ecologica Compensativa) was developed within a protocol between Marche Region and Università Politecnica delle Marche. The methodology was approved with Regional act 780/2023.**
- **During the implementation the method was tested in some practical cases (es. Railways work in Natural Park Gola della Rossa)**
- **About timing:**
 - **Method implementation required 2 years (with tests).**
 - **For the application to real case, usually from 2 to 5 years**



$$ABNmin = \frac{AD \times VND \times FE \times FC \times D}{\frac{VNF - VNI}{FTR}}$$

Superficie minima
da ripristinare

$$ABN_{min} = \frac{AD \times VND \times FE \times FC \times D}{\frac{VNF - VNI}{FTR}}$$

Valore ecologico del
biotopo (VEB) danneggiato

Valore del biotopo
da ripristinare

Legenda	
ABNmin	Dimensione minima delle aree da destinare a misure di compensazione (ha o m ²)
AD	Superficie del biotopo danneggiato (ha o m ²)
VND	Valore unitario naturale del biotopo danneggiato
FRT	Fattore di ripristino temporale del biotopo danneggiato/del nuovo biotopo da realizzare
FC.B	Fattore di completezza botanico (biotopo danneggiato)
FC.F	Fattore di completezza faunistico (biotopo danneggiato)
FC.SE	Grado di completezza ecosistemica - Servizi strutturali e funzionali (biotopo danneggiato)
FC.RE	Grado di completezza ecosistemica - Servizi posizionali nelle reti ecologiche (biotopo danneggiato)
FC.PT	Grado di completezza ecosistemica - Servizi paesaggistico-territoriali (biotopo danneggiato)
FC	Fattore di completezza totale (biotopo danneggiato)
D	Fattore di danno
VNF	Valore unitario naturale finale del nuovo biotopo da realizzare
VNI	Valore unitario naturale iniziale del biotopo usato per il recupero

ABNmin dipende sia da quello che viene danneggiato sia da quello che viene ripristinato: la VEC può essere utilizzata anche per confrontare possibili alternative

PM228

Superfici naturali interferite in modo permanente 14,6 ha

FORMAZIONI	SUP. MQ
Arbusteto	12.710,93
<i>Arbusteto deciduo di Spartium junceum L.</i>	12.710,93
Bosco	71.182,35
<i>Bosco deciduo di Ostrya carpinifolia Scop.</i>	16.330,18
<i>Bosco deciduo di Populus nigra L.</i>	33.636,72
<i>Bosco deciduo di Quercus pubescens Willd.</i>	21.215,45
Gariga	3.648,35
<i>Gariga camefitica di Satureja montana L.</i>	3.648,35
Prateria	37.503,42
<i>Prateria aperta discontinua di Bromus erectus Hudson</i>	3.097,24
<i>Prateria chiusa continua di Bromus erectus Hudson</i>	7.928,18
<i>Prateria chiusa continua di Dactylis glomerata L.</i>	-
<i>Prateria chiusa continua di Inula viscosa (L.) Aiton</i>	26.478,00
Rimboschimento	21.793,39
<i>Rimboschimento sempreverde a pino nero</i>	21.793,39
Totale complessivo	146.838,43

Scenario di compensazione 1

Realizzazione di **Formazioni boschive/arbustive planiziali** a partire da incolti e campi abbandonati di piante annue/seminativi

Scenario di compensazione 2

Realizzazione di **aree umide** a partire da incolti e campi abbandonati di piante annue/seminativi

Scenario di compensazione 3

Realizzazione di **Formazioni boschive/arbustive planiziali e aree umide** a partire da incolti e campi abbandonati di piante annue/seminativi

FC 1.5 and D 1.07			
	ABNmin		Rapporto di compensazione
Scenario 1	113		8
Scenario 2	45		3
Scenario 3	Bosco	Area Umida	
	75	15	6

Technical and regulatory challenges

- 1. From a regulatory point of view, the application of the VEC interacts with the current regional legislation on forest management. To ease the process, a modification to the forest law has been proposed and it is under approval.**
- 2. From a technical point of view, the application of the method requires specific competences on ecology. Training courses for evaluators and operators are planned.**




The VEC methodological approach

The Compensative Ecological Evaluation (VEC) method has been approved with act of the regional assembly n. 780 of 05/06/2023.

This approach allows introducing nature-based solution every time a project or a plan is expected to damage or to modify the ecological value of an area, enhancing in the meantime the carbon stock capacity of the natural systems.





It's QUESTION TIME!!





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