



# Promoting forest management for climate change mitigation through the design of a local climate credit market (2017-2022)

**LIFE CLIMARK project**  
After Life Communication Plan





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



**Generalitat  
de Catalunya**



**Centre de la Propietat  
Forestal**



**Oficina Catalana  
del Canvi Climàtic**

**CTFC**



**Universitat de Lleida**  
Escola Tècnica Superior  
d'Enginyeria Agrària



**Consiglio  
Nazionale delle  
Ricerche**

**Edited by:**

Forest Ownership Centre

Torreferrussa

Carretera de Sabadell a Santa Perpètua, km. 4,5

Apartat de correus 240, 08130 Santa Perpètua de Mogoda

Tel.: 93 574 70 39

e-mail: [cpf@gencat.cat](mailto:cpf@gencat.cat)

[www.cpf.gencat.cat](http://www.cpf.gencat.cat)

**Photographs:** CPF archive

**Graphic design and layout:** Elizabeth Fernández (Forest Ownership Centre)

**Translation and language consulting services:** Tys, Traducciones y Tratamiento de la Documentación, SL

**Production:** Entitat Autònoma del Diari Oficial i de Publicacions

# 1

## THE LIFE CLIMARK PROJECT

### 1.1 AIMS

The main aim of the CLIMARK project was to contribute to mitigation of climate change and the adaptation of forests by promoting multifunctional forestry management through the creation of a voluntary market for climate credits.

The specific objectives of the project were:

- Maintain and improve the mitigating and adaptive capacity of forests in Mediterranean Europe.
- Design a local climate credit market as a tool to incentivise multifunctional forest management.
- To raise awareness among all the actors interested in offsetting emissions and other environmental impacts and helping Mediterranean woodlands to adapt to climate change, training them and providing them with appropriate tools.





## 1.2 PARTNERS

The project involves five partners, four of whom are Catalan: the Forest Science and Technology Centre of Catalonia (CTFC), the University of Lleida (UdL), the Catalan Office for Climatic Change (OCCC) and the Forest Ownership Centre (CPF). The fifth is Italian: the National Research Council Institute for Agricultural and Forest Systems in the Mediterranean (CNR). The Forest Ownership Centre is the coordinating partner.



Centre de la Propietat  
Forestal



Oficina Catalana  
del Canvi Climàtic

CTFC



Universitat de Lleida  
Escola Tècnica Superior  
d'Enginyeria Agrària



Consiglio  
Nazionale delle  
Ricerche

## 1.3 PRINCIPLES

### a) Multifunctional forest management

In Catalonia, and throughout the Mediterranean in general, there are three key processes related to climate change on which forestry management can have a positive impact: the **carbon balance**, the **water balance** and the **conservation of biodiversity**.

The Life Climark project has identified forestry measures that can have a positive impact on these three processes. They are mainly aimed at promoting the **management and restoration of existing forests**, within which **the planting of new trees** is an option, while their ecological, technical and economic viability is guaranteed.

### b) Coherent management on a landscape scale, based on local participation and governance

We have introduced the concept of **Forestry projects for mitigation and adaptation to climate change (PROMACC)** based on grouped forestry management.

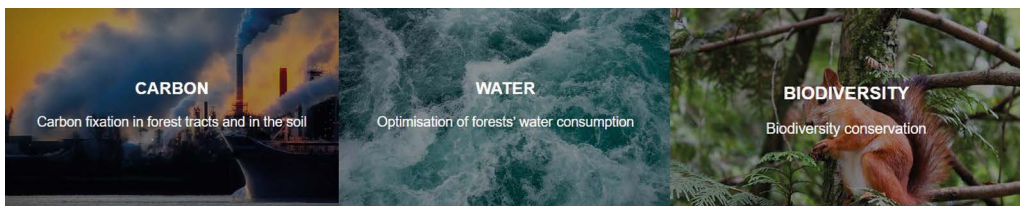
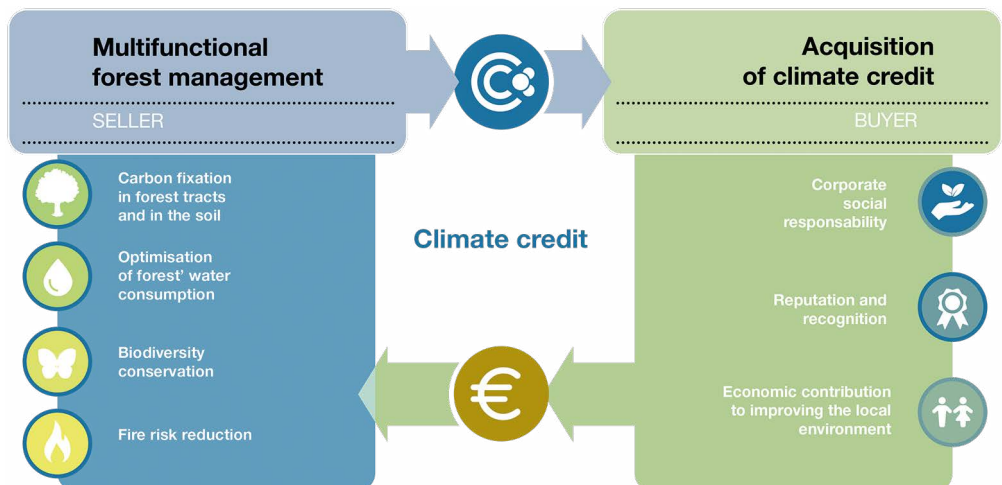
PROMACC projects:

- These are **executive projects promoted voluntarily by forest owners in a particular area**, who carry out forest management measures that contribute to the area's ability to mitigate and adapt to climate change, over a maximum of three years.
- They are based on **participatory planning on a landscape scale**, setting forestry management priorities according to mitigation and adaptation criteria in line with local development targets.

### c) The voluntary climate credit market

This market must bring forestry projects into environmental funding circuits, making it easier for companies and institutions to invest in nature-based solutions in Catalonia, within the framework of **voluntary compensation or corporate social responsibility**.

The market is based on a new unit of exchange: **climate credits**, designed to highlight the fact that forest management requires a global perspective, **beyond carbon**. Credits are calculated, therefore, based on the positive impact of forestry management on 3 key vectors related to mitigating climate change and adapting to it: **carbon, water and biodiversity**.



## 1.4 WORK CARRIED OUT IN THE PROJECT

The concept and design of the new climate credits market and the tools needed to implement it were produced through a collaborative effort over six years (2018-2022) carried out by various entities coordinated by The Forest Ownership Centre under the umbrella of the LIFE CLIMARK project, jointly funded by the European Union.

### SUMMARY OF THE MAIN TASKS COMPLETED

We have identified and tested several multifunctional forest management treatments for climate change mitigation and adaptation, applying them in more than 100 hectares, on 28 forest estates distributed throughout Catalonia and one region in Italy.



1. Landscape Unit (LU) Montmell
2. LU Vall de Rialb
3. LU Aspres
4. LU Replans de Berguedà
5. LU Capçaleres del Llobregat
6. LU Serres d'Ancosa
7. Region of Vèneto

---

We carried out an assessment of the **short-term impact of forest management**, based on environmental and socio-economic indicators and we have installed on-site monitoring systems for the **most innovative indicators**, such as the impact on water or in soil carbon.

---

We developed **methodologies to estimate the medium and long-term impact of forest management** which are as robust as possible, according to the current knowledge.

---

We worked with **companies that want to make a contribution to the region** through the benefits offered by climate credits, because these credits respond to their environmental needs.

---

We have designed the **climate credit market** as a system for funding the ecosystem services provided by forest management.

---

We conducted **eight pilot trials** to check the process of generating and funding climate credits.

---

We have made every effort to **raise awareness of the concept of climate credits and the benefits of multifunctional forestry management**, informing potential participants in the market, researchers and society as a whole.

---

## 1.5 RESULTS

As a result of five years' work by the partner organisations in the project, with the assistance of the forest owners and public and private institutions that have supported us, the LIFE CLIMARK project has achieved the following:

### SUMMARY OF MAIN PRODUCTS AND RESULTS

Publication of the **1st Methodology for estimating the medium-term impact of forest management on the carbon and water balances and on biodiversity**, agreed with the main research experts and participants.

Introduction of the idea of **Forestry projects for mitigation and adaptation to climate change (PROMACC)** based on grouped forest management. So that local associations and forest ownership groups can draw them up, the following tools have been prepared:

- **Instructions for drafting and implementing PROMACCs.**
- A **calculator** for estimating their impact.

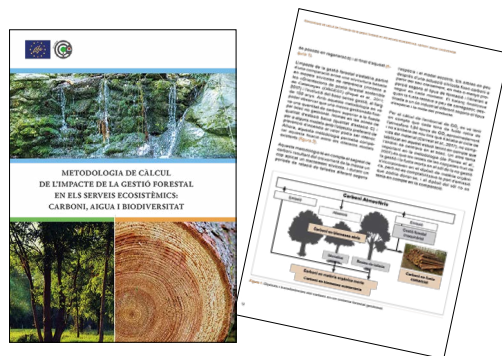
Design of a pioneering regional **payment mechanism for ecosystem services generated by forest management: the new Voluntary climate credit market**. In Catalonia, the market has government approval and it is hoped that it will be formally implemented in 2023. In Italy, consideration is being given to incorporating CLIMARK methodology in the new national regulations for carbon accounting.

**Application of the mechanism for climate credit transactions, via eight pilot schemes** in different landscapes of Catalonia.



#### Pilot trials for the Climate Credit Market

1. Lord Valley; 2. Segre-Rialb Basin
3. Castellar del Vallès; 4. Serra de Collserola
5. Serres de Miralles-Ancosa; 6. La Garrotxa Volcanic Zone
7. Bianya Valley; 8. Muga Valley; 9. Friuli-Venecia-Julia



Methodology for estimating the impact of forest management on the carbon and water balances and on biodiversity.

# 2

## COMMUNICATION PLAN

### 2.1 COMMUNICATION PLAN DURING THE PROJECT

In order to facilitate the planning and monitoring of all communication and knowledge transfer activities foreseen in Life Climark, a communication plan was defined that granted coherence and coordination.

This plan, which was annually revised, made it possible to integrate very varied communication actions organised by the different partners, reaching different stakeholder groups.

The main activities carried out during the project lifespan are summarized below:





## Communication towards the general public

- Leaflet **presenting** the project and portable **roll-up**.
- Website page: [www.lifeclimark.eu](http://www.lifeclimark.eu) and 4 electronic newsletters.
- Participation in **social media** (Facebook and Twitter).
- Installation of 4 **outdoor information panels** and 2 **indoor panels**.
- 3 **press releases**: 2 general notes about the project and one on pilot studies.
- 44 **appearances in digital and paper media**: 1 on television, 4 on radio, 6 in regional press and 32 in local press.

## Information sessions for potential forestry promoters and for investment companies, in Catalonia and Veneto

- 13 **information sessions and fieldtrips for the forestry sector** to explain the role of forestry management in mitigation and adapting forests to climate change.
- 17 **training workshops** to familiarise participants with the Life Climark and 7 **technical articles** in forestry sector journals in Catalonia and Italy.
- 27 **meetings with potential purchasers** of climate credits.
- 2 **information leaflets printed** (1 for promoters and 1 for purchasers) and 1 **digital catalogue** explaining how to participate in the climate credit market, aimed at owners and companies/institutions that may buy credits.

## Networking and awareness raising activities among researchers, government bodies and national and international organisations

- 16 **networking activities** with organisations and projects working on forestry management and payment for ecosystem services (PES) schemes.
- 5 **scientific articles in high-impact international journals**.
- Participation in 34 **events organised by national and international projects and institutions**: invited communications, oral presentations and posters at seminars, conferences, meetings and workshops.
- End-of-project **conference**.



Seminar "The market of Climate Credits, a tool to promote multifunctional forest management" hosted by the Climate Action Catalan Ministry in the fall of 2022.

## 2.2 AFTER LIFE COMMUNICATION PLAN

When the LIFE CLIMARK project concludes, there are plans to continue publicising it and drawing attention to the results obtained, to help ensure that its impact persists in the period 2022-2027.

Special emphasis will be placed on maintaining and monitoring the measures taken and publicising and supporting the future climate credit market.

### Monitoring stands where forestry treatments were applied

The 12 stands that are most significant from the ecological, dasometric and edaphological point of view have been selected to be included in the Forest Ownership Centre's network of demonstrative plots. This ensures the continuity over time of the measurements needed to assess the development of the forest and the long-term impact (up to 15 years) of multifunctional management on carbon, water and biodiversity.

#### *Ecological and dasometric monitoring*

Repetition of forest inventories every 5 years on permanent plots on managed stands and on control stands.

Data Controller	Forest Ownership Centre (CPF)
Frequency	Every 5 years
Funding	CPF Innovation and Knowledge Transfer Plan and Spanish and EU competitive projects

#### *Soil carbon monitoring*

Repetition of sampling of organic soil horizons and the upper layers of mineral soil to assess the effects of forest management on carbon sequestration in the soil. This will be done after 8 years on permanent plots in managed and in control stands.

Data Controller	The Forest Science and Technology Centre of Catalonia (CTFC)
Frequency	At least once: after 8 years
Funding	Spanish and EU competitive projects

#### *Contribution of felling waste to carbon soil sequestration*

Long-term monitoring of the decomposition of felling waste in experimental stands in the Solsonès region with different types of tree harvest residues (Action C4 in the project), a mechanistic model will be used to simulate the effects of climate and the type of waste on carbon sequestration in the soil. This will be done 8 and 12 years after the establishment of the experimental site.

Data Controller	The Forest Science and Technology Centre of Catalonia (CTFC)
Frequency	At least twice: after 8 and 12 anys
Funding	Spanish and EU competitive projects

### ***Monitoring the effects of forest management on water balance***

Dendrochronological sampling of dominant trees in managed and control stands to assess the effects of different management options on the growth of trees in dry years. The physiological mechanisms will be interpreted by the isotopic analysis of rings in representative years.

Data Controller	The Forest Science and Technology Centre of Catalonia (CTFC)
Frequency	Once: 5 years after management
Funding	Spanish and EU competitive projects

### ***Assessment of the effects of forest management on water resources in the areas monitored***

In the Vallcebre and La Llacuna areas, monitored by the IDAEA-CSIC and the ACA, respectively, monitoring is scheduled to continue.

Data Controller	CPF-IDAEA-ACA
Frequency	Annually and every 5 years after management
Funding	Spanish and EU competitive projects

### ***Monitoring of carbon emissions caused by fire***

Compilation of annual data and perimeters of forest fires to validate the output of simulations (Annual Burn Probability (aBP), Flame length (CFL)) and calculate emissions occurring in the landscape units modelled.

Data Controller	University of Lleida (UdL)
Frequency	At least twice: 2 and 4 years after the project ends
Funding	Spanish and EU competitive projects

## ***Monitoring of carbon and biodiversity stands in the Veneto region***

CNR will measure the two Italian sites, to verify the medium- to long-term effect of forest management on carbon and biodiversity.

Data Controller	Consiglio Nazionale delle Ricerche (CNR)
Frequency	Once per site in the next five years
Funding	Own budget and other European project funds

## **Closing of pilot trials (8 PROMACCs)**

Closing of the pilot trials set up in the project, based on framework agreements (4+2) signed with different regional bodies to implement the 8 PROMACCs. The following activities are included in all cases:

- Identification of measures to be implemented.
- Supervision of forestry works defined in PROMACCs.
- Obtaining funding.
- Support for the arrangement of contracts between entities providing and funding ecosystem services.
- Informing the forestry sector and the general public on the measures taken and publicising the results.
- Monitoring the impact of forest management on carbon, water and biodiversity indicators.

Data Controller	Forest Ownership Centre (CPF)
Date scheduled	2022-2028
Funding	Own budget

## **Regulation of the climate credit market**

In Catalonia, the CPF and the OCCC will work together to establish a legal framework for the climate credit market. It is hoped that by 2023 there will be regulations governing the climate credit market that also include regulations on the content and implementation of the PROMACC.

In Italy, the CNR will continue to form part of the National Voluntary Carbon Credit Board. In the near future, activities to further promote climate credits will continue. At present, we are discussing how



to incorporate this innovative type of credit in Italy, as the country has no specific legislation for a voluntary market. The idea of offsetting other ecosystem services was very well received by the board's technical experts.

Data Controller	CPF-OCCC and CNR
Date scheduled	2022-2024
Funding	CPF staff, OCCC and CNR

### Climate credit market platform

The OCCC will create a platform to register and publicise PROMACCs, their impact and the companies that fund them. This platform could be set up on the DACC server or, temporarily, on the Life Climark website.

Although the market created for the Life Carbomark project (the only one which is a public initiative) no longer functions, the CNR will organise promotional activities, until an official national market can be created, one of the aims of the Carbon Credit Board.

Data Controller	OCCC-CPF and CNR
Date scheduled	2022-2024
Funding	Own budget

### Support for new PROMACCs

In Catalonia, while the climate credit market is not fully regulated and during the first year in which it operates, the CPF will ensure that new PROMACCs are correctly drawn up and implemented, so that the project can be correctly replicated.

The CNR will promote the introduction of the sale and purchase of climate credits in different situations. For example, it will promote the CLIMARK approach to forestry management in the Friuli-Venezia Giulia region.

Data Controller	CPF and CNR
Date scheduled	2022-2024
Funding	Own budget

## Improved tools for drawing up PROMACCs

---

There are plans to improve the calculator for the impact of forest management on carbon and water indicators, and establish a website dashboard for it to be used more effectively, and to publish templates for the drafting of PROMACCs.

Data Controller	Forest Ownership Centre (CPF)
Date scheduled	2022-2023
Funding	Own budget

## Ongoing improvements to the methodology for calculating the impact of management in forest ecosystem services

---

In Catalonia work will continue on improving the methodology for calculating the impact of forest management in ecosystem services: carbon, water and biodiversity.

The CNR will offer support to its partners in the CLIMARK project by supplying new data from projects in progress. The CNR is currently the coordinator of the LifeSPAN project, which promotes forestry management to increase biodiversity, the results of which may serve to implement the biodiversity component of climate credits. The CNR is also the promoter of the National Biodiversity Centre, whose aims include research into and the development of solutions for monitoring, preserving and restoring functional biodiversity, with a view to counteracting human impacts and the effects of climate change and supporting ecosystem services.

Data Controller	CPF-CTFC-UdL and CNR
Date scheduled	2022-2025
Funding	Own budget and other European project funds

## Publications and participation in conferences

---

At least two articles or technical documents will be published, aimed at forest owners, managers and technical personnel, and at companies and organisations interested in acquiring climate credits.

Two or three workshops are also planned in pilot trial areas or in demonstrative stands.

The CTFC plans to publish at least two articles:

- an informative article in a forestry journal, presenting the main conclusions of monitoring the effects of the different management options on carbon, water and biodiversity.
- a second article in an internationally known journal on the results and conclusions of ecological, dasometric and edaphic monitoring.

Data Controller	CPF-CTFC-UdL-OCCC-CNR
Date scheduled	2022-2027
Funding	Own budget

## Training

At least 3 courses will be held offering training in drawing up PROMACCs and calculating the impact of forest management on carbon, water and biodiversity, based on the methodology developed in the project.

Data Controller	Forest Ownership Centre (CPF)
Date scheduled	2022-2027
Funding	Own budget

## Dissemination of material produced during the project

Published material will continue to be distributed among the target audience (forestry sector and potential credit purchasers) through conferences, technical visits, the website, etc. New material will also be produced for use by funding companies to highlight the importance of climate credits, based on a strategy for raising the profile of the voluntary climate credit market. The CNR will also distribute this material during activities by the technical board dealing with the voluntary carbon credit market.

Data Controller	CPF-UdL-CTFC-OCCC-CNR
Date scheduled	2022-2027
Funding	Own budget

## Marketing strategy to promote the climate credit market

A strategy to promote the voluntary climate credit market will be drawn up so that companies funding the scheme can inform the public and their own sector and personnel about their participation in the market and its positive impact on the region.

Data Controller	CPF-OCCC
Date scheduled	2023-2024
Funding	Own budget

## Website content maintenance

---

The website set up for the project ([www.lifeclimark.eu](http://www.lifeclimark.eu)) will remain in place for at least five years and its content will be updated regularly to include the activities of the After LIFE communication plan and the results of pilot schemes carried out.

Data Controller	Forest Ownership Centre (CPF)
Date scheduled	2022-2027
Funding	Own budget

## Appearances in the media

---

At least three press releases are envisaged in the After-LIFE period dealing with the results of pilot tests or the climate credit market itself.

Data Controller	CPF-UdL-CTFC-OCCC-CNR
Date scheduled	2022-2027
Funding	Own budget





# Climate Credits

[lifeclimark.eu](http://lifeclimark.eu)

  @lifeclimark

**Life Climark**



The LIFE CLIMARK project (LIFE16 CCM/ES/00005) is a LIFE climate change mitigation project, cofinanced by the European Union Program



## Contact

Forest Ownership Centre  
Carretera de Sabadell a Santa Perpètua, km. 4,5  
08130 Santa Perpètua de Mogoda  
93 574 70 39 - [info@lifeclimark.eu](mailto:info@lifeclimark.eu)

**LIFE16 CCM/ES/000065**

**[www.lifeclimark.eu](http://www.lifeclimark.eu)**



Centre de la Propietat  
Forestal



Oficina Catalana  
del Canvi Climàtic



Universitat de Lleida  
Escola Tècnica Superior  
d'Enginyeria Agrària



Consiglio  
Nazionale delle  
Ricerche



**The LIFE CLIMARK project** (LIFE16 CCM/ES/000065) is a **LIFE** climate change mitigation project, cofinanced by the European Union Program.