



2020 – 2026

LIFE Coteaux Gascons Project **Preserve and restore the ecological continuity** **of open agro-pastoral environments**

LIFE 19 NAT/FR/000828

Un projet porté par



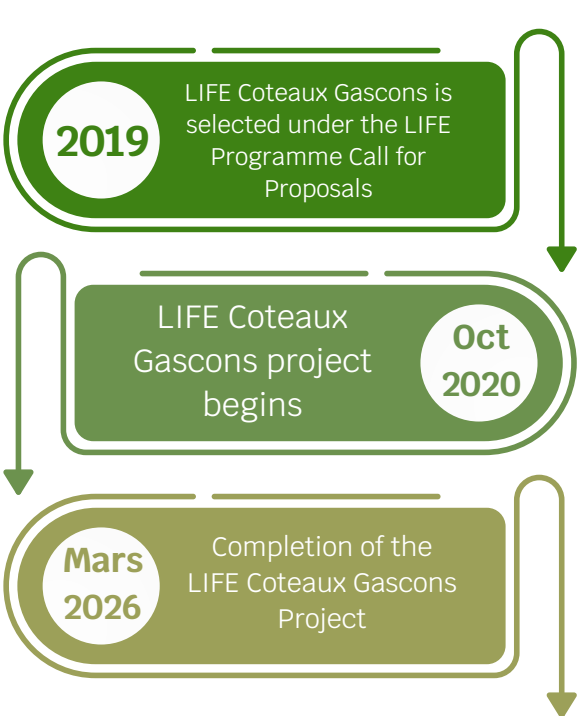
Financé par

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The project context

Agro-pastoral habitats (meadows, grasslands, heathlands) support a rich biodiversity that depends on extensive grass-based livestock farming. These habitats provide numerous ecosystem services and play a key role in maintaining ecological continuity at local, regional, national and European scales. However, their extent, conservation status and connectivity are declining due to livestock farming facing challenges (slopes, drying or flood-prone conditions, etc.) making it less competitive. In addition, it is expected to face a significant wave of retirements in the coming years, with few replacements.



The Gers: A Key Link in Ecological Continuity of National Importance

Ecological continuity of thermophilous open habitats

Pyrenean Range – Atlantic Coast Corridor



Ecological continuity of hedgerow networks

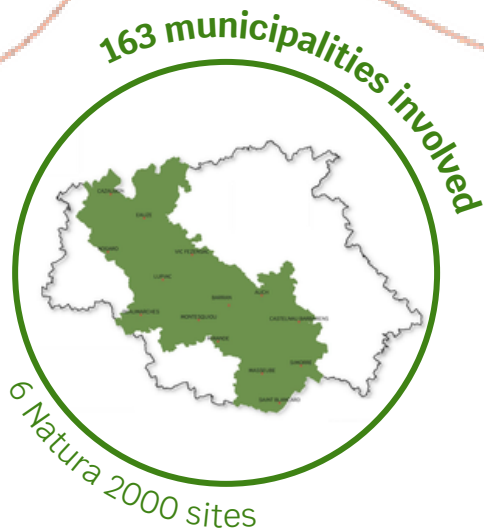
South-West Hedgerow Corridor between the Massif Central and the Pyrenees



The LIFE Coteaux Gascons project in brief

ADASEA of Gers, in collaboration with Safer Occitanie, the Conservatoire National des Pyrénées et de Midi-Pyrénées and the CPIE Pays Gersoises, designed this project with the following objectives:

- Preserve and restore the ecological continuity of agro-pastoral habitats;
- Address the interdependence between livestock farming and biodiversity;
- Conserve natural heritage and rural landscapes;
- Prepare the territory for climate change and socio-economic challenges.



Open agro-pastoral environments (MOAP)

Dry, wet, and floodplain grasslands



- Tall herbaceous plants (approximately 1 m)
- Dense vegetation formations
- Suitable for mowing and/or grazing

The lawns



- Low herbaceous formations (less than 20 cm)
- Low-productivity biomass
- Suitable for grazing

The juniper heaths, wooded, damp...



- Composed of bushes, shrubs and thickets
- Shrub and herbaceous formations
- Suitable for extensive grazing

These agro-pastoral open habitats are interwoven with other habitat types, such as rivers, woodlands, hedgerows and ponds, forming a mosaic of interconnected ecosystems and complex landscapes.

Iconic species

These habitats are home to numerous species, some of which are of significant conservation concern.

LC Least Concern

NT Near Threatened

VU Vulnerable

EN Endangered

CR Critically endangered

Birds

- 89 species recorded, including 79 breeding species.
- 34 are associated with MOAPs
- Around 20 are of high conservation value.

Common Linnet



Yellowhammer



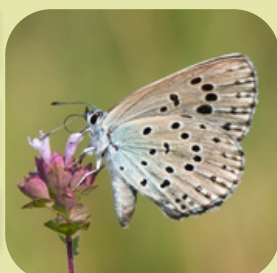
Red-backed shrike



Large Copper butterfly



Large blue butterfly



Pearly-white filipendula



Butterflies

- 78 butterfly species recorded.
- Most are related to MOAPs.
- 5 are considered species of high conservation value.

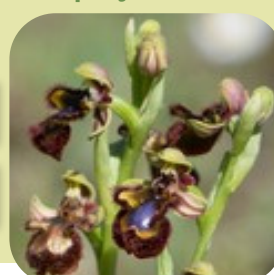
Orchids

- 31 species and 8 hybrids observed.
- 30 species are related to MOAPs.
- 4 are of high conservation value.

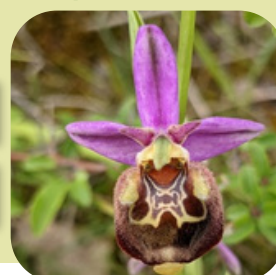
Fragrant orchid



Ophrys mirror



Ophrys of Gers





The initial objectives

There is a real interdependence between the environments and management practices related to extensive grass-based livestock farming.

Mowing and/or extensive grazing (grass-based grazing with low stocking densities) shape the landscape and promote rich biodiversity, while providing livestock with high-quality forage resources. The presence of these farming systems across the territory helps maintain and preserve the ecological continuity of open agro-pastoral habitats.

Without livestock farming, these habitats may become overgrown, converted to cropland, afforested or urbanised, resulting in the loss of habitats for fauna and flora. This in turn leads to a decline in biodiversity and the many ecosystem services these habitats provide, including the regulation of natural hazards such as flooding and soil erosion, as well as climate regulation.

Based on these findings, the project set the following objectives:



- Preserve and restore open agro-pastoral environments and ecological continuity
- Supporting livestock farmers to improve environmental management and their working conditions
- Supporting landowners in managing their land
- Involving elected officials for better integration into public policies
- Raising awareness among residents and visitors

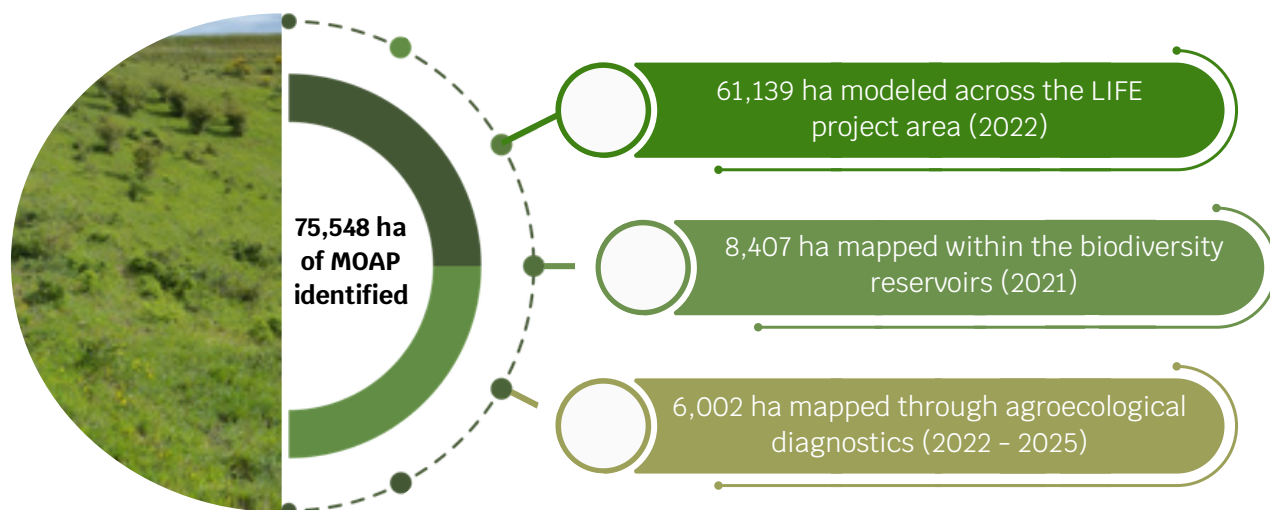
To make this happen

Nearly 60 actions were implemented during the project, organized into several categories:

- | | | |
|---------------------------------|---|------------------------------|
| 1 Understand, assess and plan | 3 Ensure the long-term stewardship of habitats | 5 Raise awareness and inform |
| 2 Preserve and restore habitats | 4 Train and engage land managers, farmers and local authorities | 6 Monitor and evaluate |

Understand, assess and plan

The work consisted of identifying open agro-pastoral habitats and assessing ecological continuity at the territorial scale. It was followed by a more detailed characterisation, conservation status assessment and mapping of the open agro-pastoral habitats found within the 25 biodiversity reservoirs.



Results :

- The LIFE project also included additional actions, such as land monitoring, farm agroecological diagnostics and action prioritisation.
- Improved knowledge of protected areas and environmental designations (ZNIEFF, Natura 2000), leading to proposals for new Sensitive Natural Areas (departmental policy).
- Integration of ecological considerations into territorial planning policies (PNR, PLUi, SCoT).
- Training in CARHAB habitat mapping.
- Establishment of a baseline for a future Grassland Observatory.

A closer look at habitats in reservoirs

6 Natura 2000 habitats of community interest represent more than 50% of the surface area of the MOAP

- 6510 – Low-altitude hay meadows
 - 6210 – Semi-natural dry grasslands and shrubland facies on limestone (Festuco-Brometalia) [remarkable orchid sites]
 - 5130 – Juniperus communis formations on calcareous heaths or grasslands
 - 6220* – Substeppe rangelands of grasses and annuals of the Thero-Brachypodietea
 - 4030 – European dry heaths
- (* priority community interest habitat)

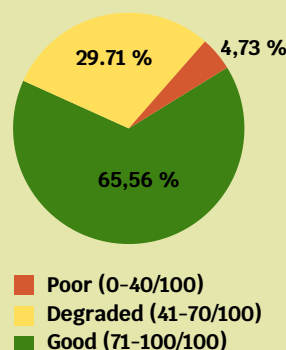
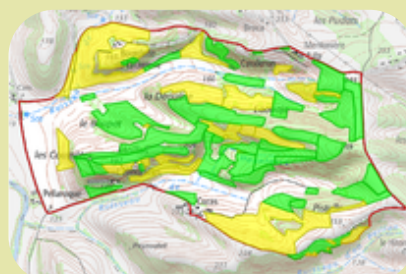
A rating was assigned according to several criteria in order to determine the state of conservation of the habitats.

2/3 of the area is in good conservation status

Mapping of EUNIS habitats (example: reservoir R10)



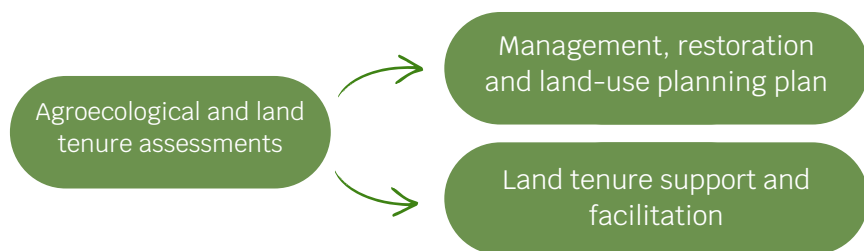
Mapping of the state of conservation (example: reservoir R10)



Preserve and restore habitats

The originality of the approach lies in **the integrated support provided through two complementary entry points**: an agroecological assessment and a land tenure assessment. The support provided through either assessment helps identify potential needs and feeds into the other, ensuring a comprehensive and coordinated approach.

TECHNICAL SUPPORT



FINANCIAL SUPPORT

Habitat restoration and land management works

Joint implementation by ADASEA32 and Safer Occitanie

The agroecological assessment provides an overview of the farm and its open agro-pastoral habitats, identifies the issues and opportunities related to the LIFE project, and takes the farmer's objectives into account to ensure the feasibility of the proposed actions.

It results in a management plan (including tailored recommendations), a restoration plan defining restoration measures such as scrub clearance, sowing and other works, together with an implementation schedule, and, where appropriate, a management agreement lasting five years for advisory support only, or ten years when LIFE funding is provided.



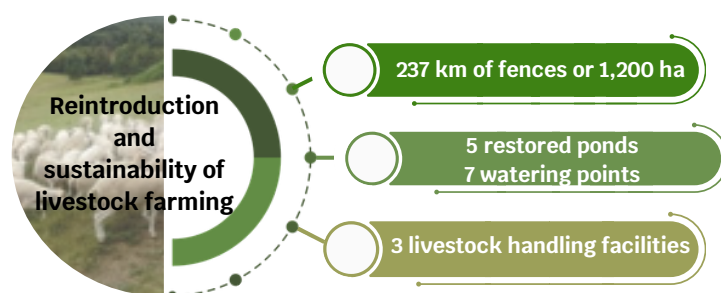
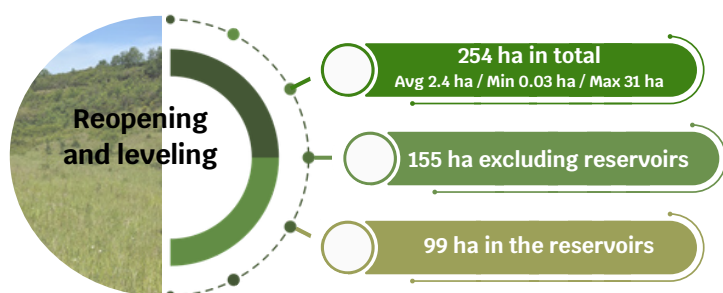
- 194 managers diagnosed, 25% of whom were women and 48% of whom were in the 31-50 age bracket
- 16,524 ha assessed, including 7,971 ha of MOAP (open agro-pastoral environments), 8,004 ha of crops, and 548 ha of woodland
- 90 managers who have signed an agreement with LIFE for at least 1 action

Habitat restoration and field improvement measures aim to enhance the conservation status of open agro-pastoral habitats and strengthen ecological continuity, while ensuring a sufficient supply of high-quality forage for grazing livestock.

Habitat restoration may be carried out mechanically and/or through the reintroduction of grazing. The latter is a more gradual approach and is often better suited to certain situations, depending on site accessibility, habitat sensitivity and cost. In such cases, field improvements, such as fencing, pond restoration and livestock watering systems, are recommended and funded through the LIFE programme.



For example, financing 2.2 km of fencing also enabled the maintenance of 9 ha of grassland and the restoration of 5.6 ha through grazing.



Preserve and restore habitats

Sowing native grassland seed mixtures



Restoration of ecological corridors through the establishment of new natural grasslands



Restoring natural flora meadows of type 6510 (low-altitude hay meadows - N2000) by sowing

Testing large-scale wild and local seed harvesting and sowing techniques



Testing the effectiveness of wild and local mixtures compared to commercial mixtures on the speed of return to a desired natural habitat

Integrating the forage and pasture needs of livestock farmers

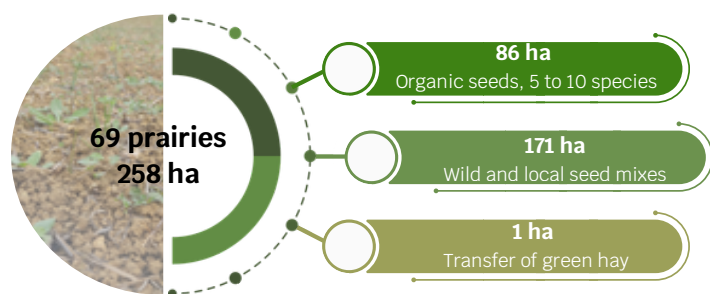
Sowing was carried out independently by the land managers, following the recommendations provided in the restoration plan, whereas seed harvesting was supervised by the project team.

The first results are encouraging, both in terms of the restoration of natural habitats and agronomic performance, particularly the quantity and quality of the forage produced.

Scientific monitoring will continue beyond the LIFE project to confirm these positive trends.

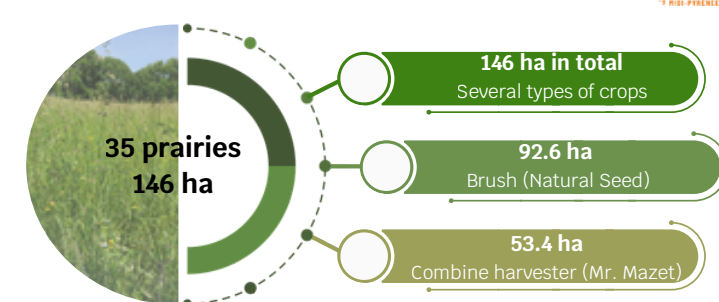
SOWING

Carried out independently by farmers



SEED HARVESTING

Supervised by the CBNPMP



Mobilise the 2023-2025 Agri-environment and Climate Measures to complement LIFE actions

Ensure the long-term management of open agro-pastoral habitats, complementing LIFE actions, by:

- Maintaining the management of restored areas;
- Restoring additional agro-pastoral habitats beyond those funded by the LIFE project;
- Supporting the continued management of habitats already in good conservation status;
- Preparing for the implementation of the After-LIFE strategy beyond 2025;
- Ensuring strong coordination between the LIFE project and other local initiatives.

143 farms have signed contracts covering a total area of 3,192 hectares. This amounts to €391,283 per year and €1,956,416 over the 5-year commitment.

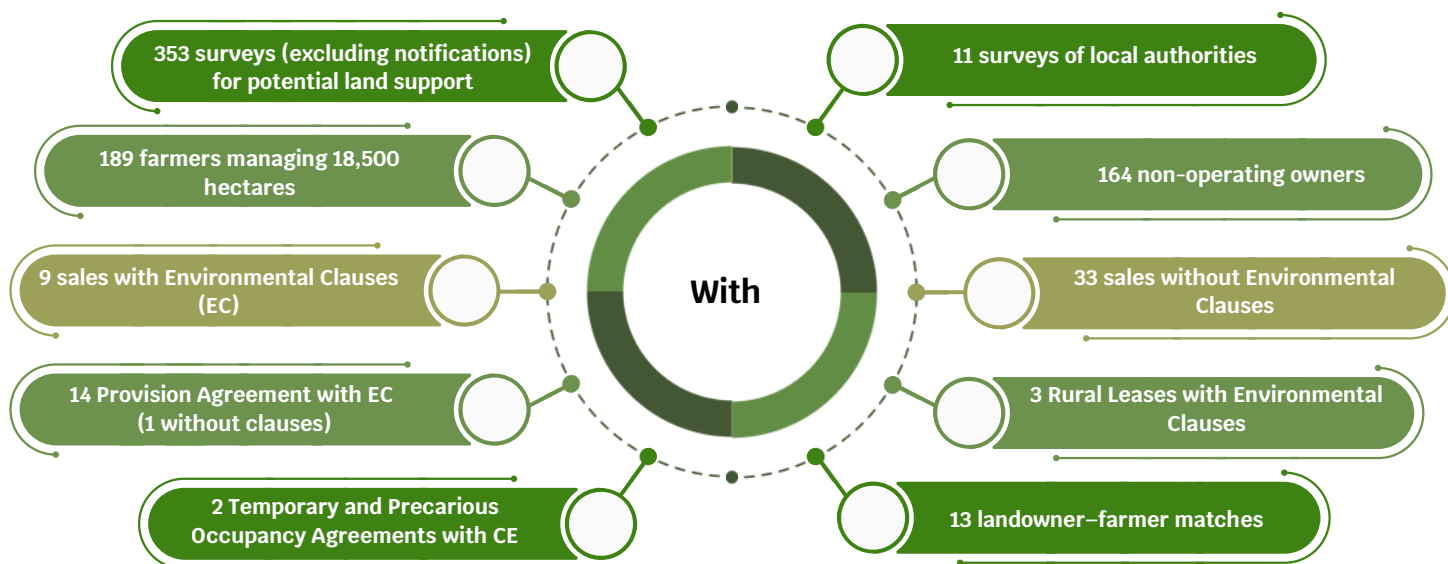
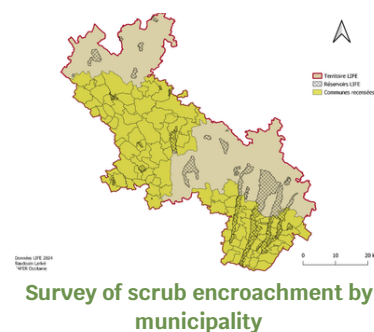
55 LIFE managers committed for a total area of 1,842 ha, i.e. €208,095 per year and €1,040,478 over 5 years.

Including 34 land managers who benefited from technical support only (all funding had already been committed or for the maintenance of existing habitats), covering 1,026 ha of MOAPs, with a 5 year commitment valued at €555,496.

Secure Habitat Transmission

The challenge of the LIFE project was to ensure the transmission of MOAP (Management of Agricultural and Rural Areas) and to reintegrate unmanaged plots into an extensive livestock farming system with a dual approach: at the LIFE level and at the individual level, by deploying several tools:

- 1 **A preliminary study made it possible to characterize the land and its evolution, and thus to identify priority sectors within the LIFE Coteaux Gascons area, based on:**
 - the location of areas with high MOAP density,
 - the presence of people pre-identified as being interested in land support,
 - the presence of a dynamic market with buyers of land and meadows outside Gers.
- 2 **Land surveying in key areas, including overgrown zones**
- 3 **Individual land survey to collect needs**
- 4 **Land monitoring via Vigifoncier**, an IT tool of Safer, and local land committees (SAFER Technical Committee + Departmental Agricultural Guidance Commissions) and direct contact with the people involved (owners, farmers)
- 5 **Land facilitation for networking and contracting with proposed **environmental clauses** adapted from a model established within the framework of LIFE for MOAP and associated elements (pond, ditch, wooded element...).**



The LIFE project was built on the complementary implementation of land tenure actions and habitat restoration measures for the benefit of open agro-pastoral habitats, landowners and livestock farmers



Examples include the establishment of an environmental lease combined with heathland restoration and pond restoration, the purchase of land subject to environmental clauses together with grassland restoration and fencing installation, as well as land tenure assessments combined with grassland re-establishment.

Raise awareness and inform



The implementation of a communication plan has established a common culture with communication challenges shared by the 4 structures.

He also specified the different target audiences: people who manage land, politicians, intermediaries (technical and institutional), and the general public (both in and out of school). For each group, key objectives were defined: to inform, involve, cooperate, raise awareness, train, and disseminate information.

With its own visual identity (logo and graphic charter), the communication focused on:

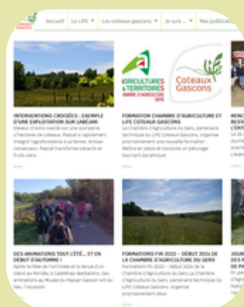
- ➔ **To raise awareness of the LIFE project, to recognize the ecological and heritage value of the environments and their link with livestock farming**
- ➔ Raising awareness of available tools; demonstrating that everyone can get involved (including sharing information) and have a significant impact
- ➔ **Promote the actors involved.**
- ➔ **Disseminate the results, especially the innovations.**
- ➔ Reaching people who do not have digital access

Several tools created have a long-term purpose and will allow awareness-raising to continue

Communication tools

Online communication

- Project website
- Facebook page
- YouTube channel featuring 8 videos
- 23 electronic newsletters



Printed and on-site communication

- Communication kit: sticker, poster, leaflet, folder
- Educational booklet
- Educational trail created with and on a farmer's property
- 5 fixed panels placed at managers' premises
- 11 mobile panels
- 1 board game and 1 game of 7 families
- 4 paper gazettes
- 2 Coteaux Festivals
- 51 activities for all audiences

- **1,968 people participated in the public events.**
- **147 people participated in the Final seminar.**



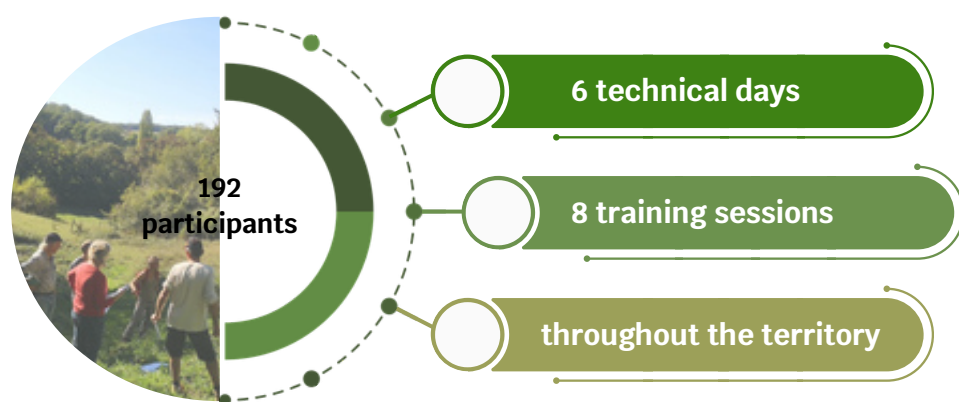


Train and engage land-use stakeholders

The project's actions primarily targeted farmers, elected representatives, and technical and institutional stakeholders, based on objectives defined at the outset of the project and refined throughout its implementation.

Several organisations, both within and beyond the project area, contributed their specific expertise to support information dissemination, the co-design of programmes, and the co-facilitation of meetings and events.

Farmers and technical support organisations



Numerous topics covered

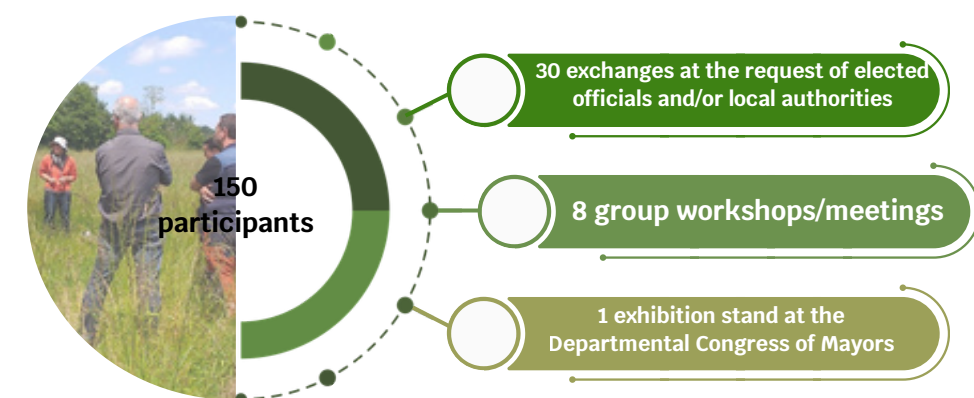
- Natural floodplains
- Maintenance of plot edges
- Restoration of meadows
- Haymaking
- Harvesting natural seeds
- Sowing of meadows
- Supporting the aging of grasslands
- Environmental management
- Biodiversity
- Balance with woody plants
- Dynamic rotational grazing
- Prepare the transmission
- Training herding dogs

Working with local structures

Particular attention was paid to involving local and departmental bodies in the areas of agriculture, the environment, food, and tourism. This included livestock associations, unions, and state representatives responsible for agricultural and environmental issues.

39 meetings organised with these structures raised awareness among 560 people among these relays.

A mobilization in support of elected officials



The LIFE Coteaux Gascons project produced a **technical handbook** summarising the **knowledge** gained on open agro-pastoral habitats and presenting the various **tools** available for their conservation and management. **Field visits** were also organised within **Natura 2000 sites**.

Networking with other LIFE projects and related initiatives also contributed to raising awareness at the regional, national and European levels.

Monitor and Evaluate

Following the initial assessment, the next step was to **monitor and evaluate the impacts of the restoration measures on both habitats and land managers**, while continuing to improve knowledge of open agro-pastoral habitats.

Impacts on ecological continuity

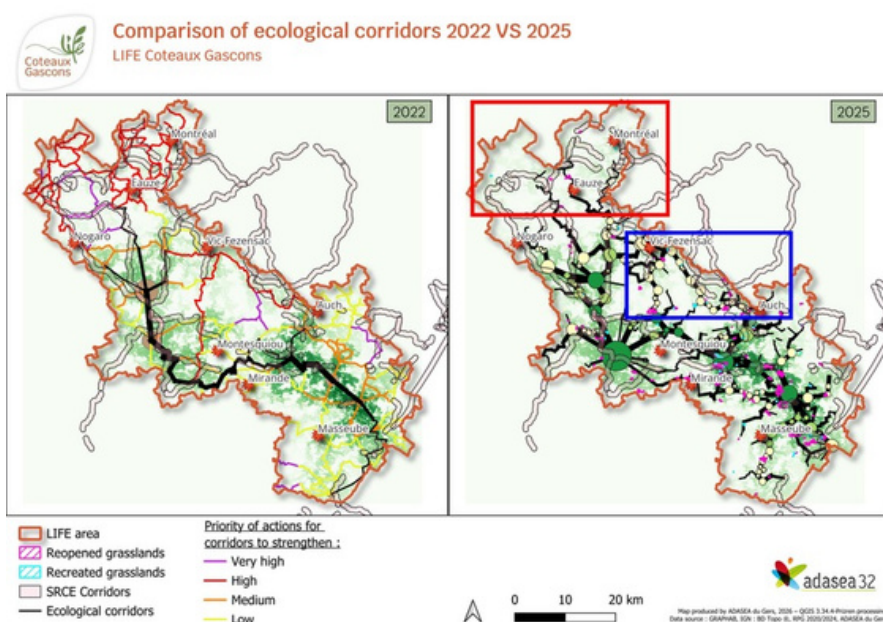
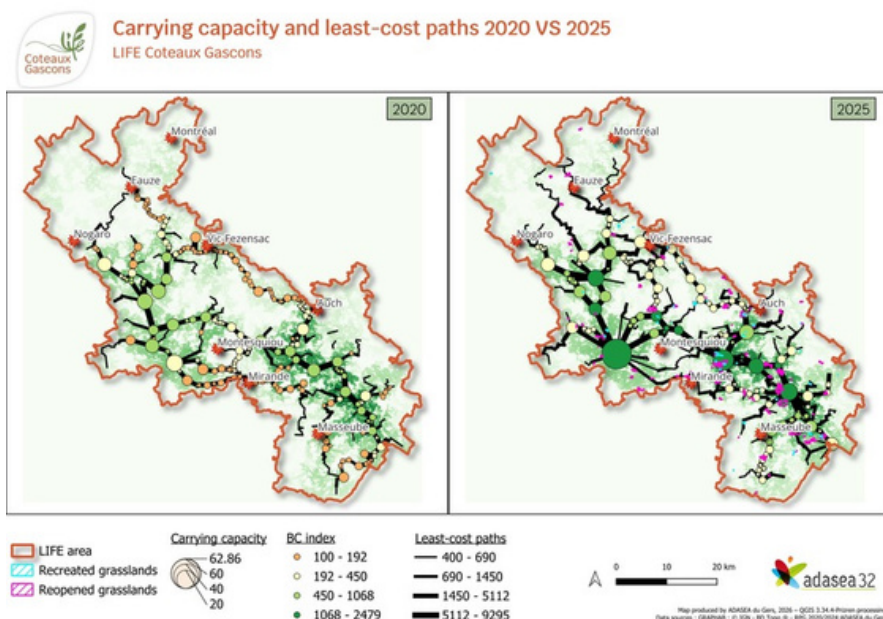
Geomatics analyses were carried out using multiple data sources, ecological modelling techniques and landscape fragmentation analysis tools.

The LIFE restoration measures have significantly improved ecological connectivity, although the ecological network remains heterogeneous across the project area.

Connectivity is stronger in the Astarac region, while it remains relatively limited in the Armagnac region.

- Increased carrying capacity of certain open agro-pastoral habitat patches.
- Strengthened role of strategic patches.

The strengthening of various ecological corridors has been achieved, particularly in areas where restoration actions have been carried out. However, **some regions remain fragmented**, particularly in parts of Armagnac, where ecological connectivity remains limited.



A Closer Look at Biodiversity Reservoirs and Ecological Corridors



Biodiversity reservoirs: areas where biodiversity is the richest and best preserved, providing the conditions for species to complete all or part of their life cycle.

Ecological corridors: areas that connect biodiversity reservoirs, providing favourable conditions for species to move, disperse and complete their life cycle.

Monitor and Evaluate

Effectiveness of Habitat Restoration Works

Two complementary approaches were implemented to assess the impacts of the LIFE project:



1

Monitoring of 4 bio-indicators
in 2021 and 2025

Orchids

Butterflies

Birds

Grassland indicator plant species

2

Assessment of the conservation
status of habitats

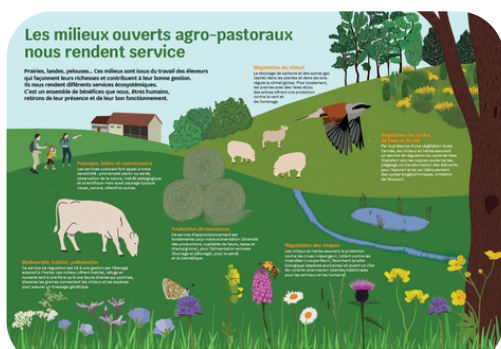


Used for habitat mapping

The monitoring involved a sample representing the diversity of environments. It is difficult to draw conclusions because the time frame is short. However, a positive trend is observed in both the reopening and seeding work.

Impacts on ecosystem services

Among the many services offered by open agro-pastoral environments and the various evaluation methods, the focus is on three areas and three indicators:



Climate regulation: 1.045 million tonnes of carbon stored in
maintained and recreated grasslands.

Regulation of the soil cycle: 13-14 hectares of agricultural organic
matter preserved and/or recreated in areas subject to strong
erosion.

Water cycle regulation: 2,232 hectares of agricultural organic
matter preserved and/or recreated in wetlands and/or floodplains

Socio-economic impacts

Beyond the financial support provided by the LIFE programme, which enabled habitat restoration, beneficiaries also recognised the improvements in working conditions resulting from the project.

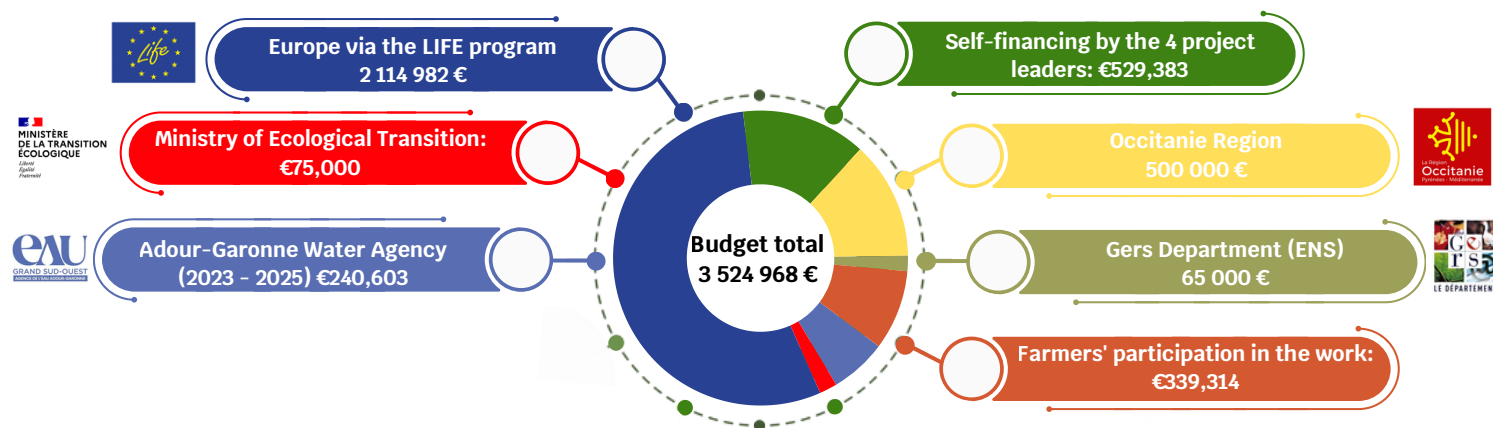
"We need to raise awareness about management. The advice I received helped me have an impact on the environment."

The exchange of knowledge and experience among land managers during meetings, together with the project's communication activities highlighting the importance of extensive grass-based livestock farming, represents another **significant outcome of the project**.

Land managers have embraced the concept of open agro-pastoral habitats, which they had previously associated mainly with mountain areas. **As a result, the Coteaux Gascons are now recognised by those who manage them as a landscape where extensive grass-based livestock farming and biodiversity are closely interconnected.**

"Yes, it's great for small farms to set up this kind of program and it provides comfort for the future. We need more biodiversity on farms."

Budget Overview



Project Evaluation

Key Strengths and Success Factors

- The project initiated a **strong local momentum** around open agro-pastoral habitats and their management through extensive grass-based livestock farming.
- The partners' **in-depth knowledge of the territory** and close relationships with local stakeholders were key factors in the successful implementation of the project.
- **Particular attention was given to providing integrated support to land managers**, combining land tenure assistance with habitat management through a coordinated approach across the different project actions.
- The project's **flexible management approach** enabled continuous adaptation to local needs, opportunities and constraints.
- **The pilot initiative on harvesting and sowing native grassland seed mixtures was well received by land managers** and has already shown encouraging results for both biodiversity restoration and forage production.
- **Agri-environment-climate measures (AECMs) were successfully mobilised** alongside the LIFE project to strengthen and sustain habitat management.
- There is **strong support** among stakeholders for continuing the actions initiated through the project.

Restoration and Land Improvement Works

Challenges and Limitations

- Compared to initial forecasts, the work involved fewer mechanical reopenings and more parcel improvements (fences) to promote a gradual reopening by the herds and improve their management.
- The project duration is too short to fully assess the impacts on the environment.
- **Achieving the objectives faced several challenges:**
 - The **increase in costs** due to the COVID-19 pandemic and the war in Ukraine in 2022 (initial assessment in 2017).
 - The **lack of 100% funding** for the LIFE project necessitates financial participation in the work by the managers.
 - **Health problems** affecting sheep and cattle herds (epizootics in 2023, 2024 and 2025) are limiting the involvement of some farmers in the project.
 - **Climatic hazards** (drought, heavy rains, etc.) causing delays in the reopening work as well as in the harvest and sowing of meadows with natural flora.

Raising awareness of the importance of conserving open agro-pastoral habitats

- The project has significantly **improved knowledge of open agro-pastoral habitats** through their identification, characterisation, mapping and ecological connectivity assessment.
- This knowledge has been **shared with local authorities and public administrations to support its integration** into planning documents and policies relating to the environment, agriculture and tourism.
- The project fostered and strengthened **partnerships** at all levels, from local to European.
- It also **created opportunities to develop additional research activities** in collaboration with the scientific community.

- The project **was launched during the COVID-19 pandemic**, which affected its initial implementation through the cancellation of the kick-off meeting and the postponement of information events, among other disruptions.
- The project successfully reached all target groups, including farmers, landowners, the general public, schoolchildren and students, and elected representatives. **However, continuous outreach remains essential to address ongoing changes** such as land sales, new farm establishments and staff turnover within organisations.
- One challenge that remains only partially addressed is the **recognition of open agro-pastoral habitats as a priority for conservation** during land transactions and their preferential allocation to livestock farmers within regional land management and allocation schemes.

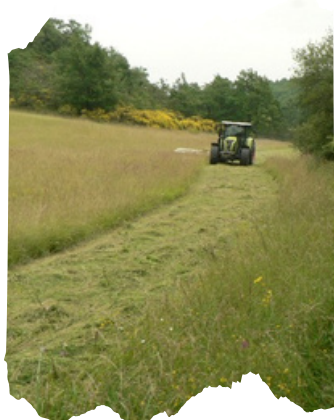


What Next?

The long-term sustainability of the project's actions was considered from the very beginning of the LIFE project and was continuously refined throughout its implementation. Its continuation will depend on the resources that can be mobilised at local, regional, national and European levels to support biodiversity conservation, sustainable agriculture and research.

Habitat Management

and managers of the areas restored through the LIFE Coteaux Gascons project have committed to maintaining and managing these habitats for at least ten years, in accordance with a framework agreement.



Environmental clauses included in land tenure agreements (leases, land-use agreements, etc.) have varying durations depending on the type of agreement. **The land managers involved are keen to continue the actions already initiated and are requesting support for additional parcels. A project is currently being developed to establish a technical support unit dedicated to the management of open agro-pastoral habitats and the conservation of agricultural biodiversity. The aim is to ensure the long-term monitoring and management of habitats supported under the LIFE project, while extending this support to new sites, including those located beyond the original project area.**

Training, awareness-raising and knowledge dissemination

Training sessions, technical workshops and advisory support will continue to be delivered by the project partners in collaboration with partner organisations. Awareness-raising activities targeting the general public will also continue, relying in particular on the Gers Departmental Tourism Committee and its network of tourist offices, accommodation providers and other local stakeholders. Knowledge transfer to environmental and agricultural professionals will be supported through networks such as LIFE Biodiv'France, Natura 2000 and other relevant initiatives.



The acquisition of new knowledge

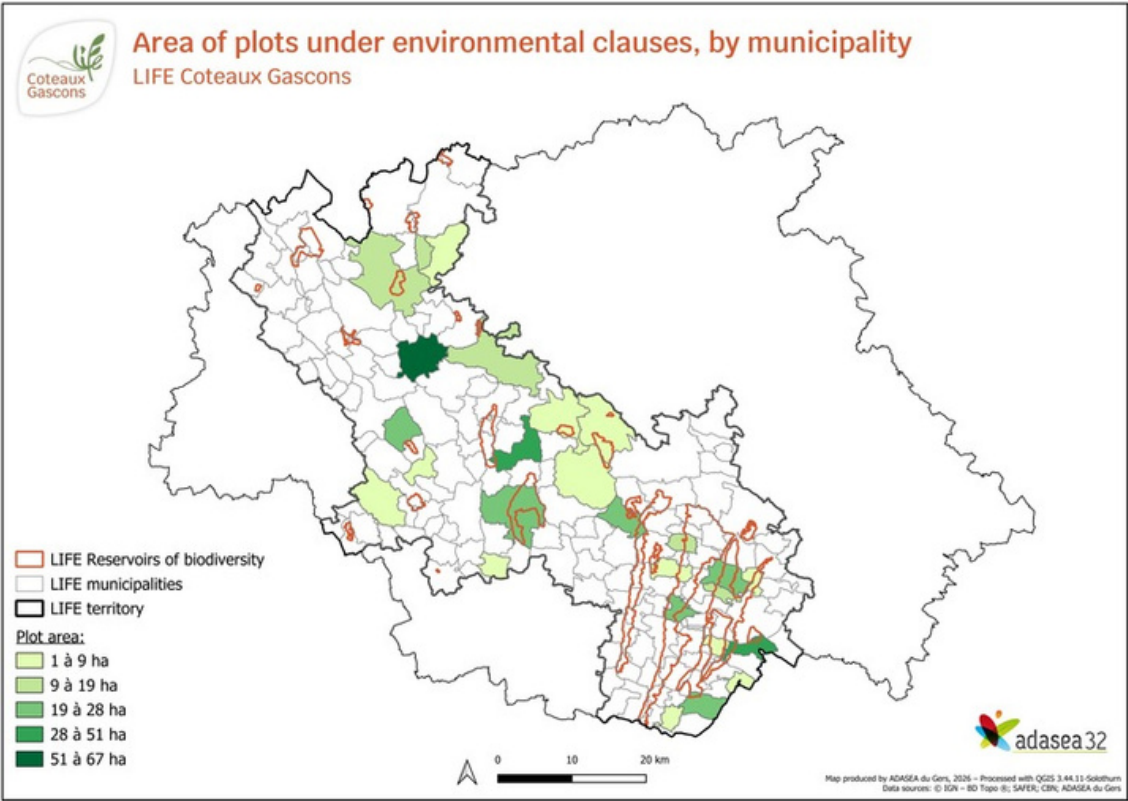


Links with the research community will continue through ongoing projects in which LIFE Coteaux Gascons is involved as an experimental area. These include:

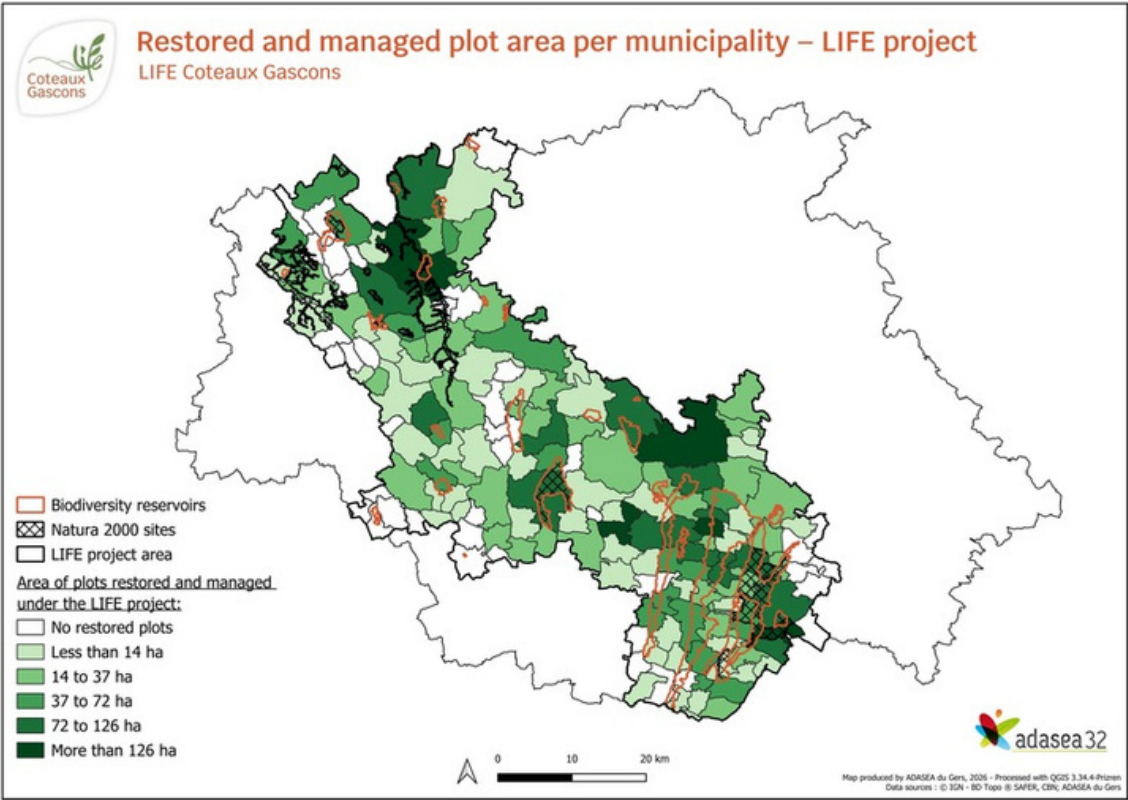
- **RestPoll** (Restoration of habitats for pollinators - Horizon Europe fund no. 101082102),
- **Solubiod** (Nature-based solutions - France 2030 fund),
- **Respyr** (co-financing by the OFB of a thesis on the monitoring of vegetation sown with local species).

Cartographic summary

Location of areas subject to environmental clauses by municipality



Location of areas restored and managed with the LIFE program





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