

## Presentation of the study area: "Causse of Larzac, Causse of Blandas, and Causse of Campestre-et-Luc" (Southern Causse region, Languedoc-Roussillon, France)<sup>1</sup>

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The name Causse is from "cau", local form of "chaux," meaning "lime." At elevations of from 900 to 1,200 m (3,000 to 4,000 ft), the Causses of Larzac and Blandas-and-Campestre-et-Luc occupy parts of and Lozère, Gard and Herault departments on an area of about 60000 ha.

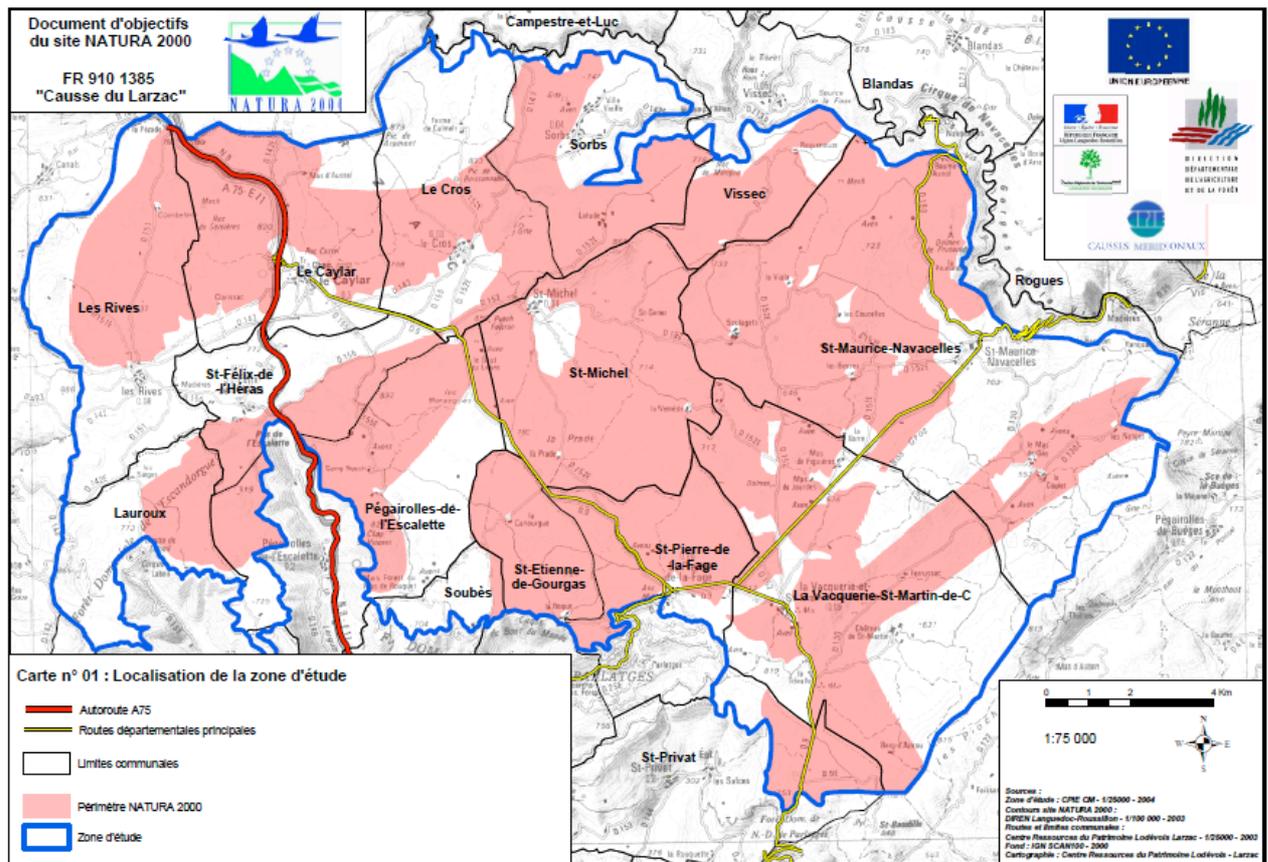
The "Causses" are gorge-gouged limestone plateaus of southwestern France. The plateaus are bare, karstlike, stony solitudes amid whose boulders scanty brush appears. The rivers (Vis, Arre, Dourbie, Virenque and Hérault) have carved canyons with fantastic rock shapes, and it is in their sheltered valleys that settlement still clings. (however, some villages are settled on the plateau). Glacial action and water erosion have opened potholes (locally called avens) in the surface that often lead down to grottoes.

The following map (Figure 1) shows the location of the Herault portion of the Causse of Larzac that is covered by our study. The Causses of Blandas and Campestre-et-Luc are situated to the north, separated from Larzac by the Vis gorges and the Cirque of Navacelle. (See file: « maps for the study area presentation").

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<sup>1</sup> Acronyms are not translated.

Figure 1: Localisation of the study area



## 1. General presentation

	Causse of Larzac	Causses of Campestre and Blandas
Department	Hérault (34), 15 communes	Gard (30), 8 communes
Geological origin	<p>A causse is a plateau (average altitude 600 to 900 m) composed of limestone sedimentary rocks characterized by four main geological features: limestones, dolomites, clays-with-cherts, and marls.</p> <p>Surface water is very rare. Subterranean water is abundant but lies deep underground and is difficult to access with bore-wells.</p>	
Climate	<p>Temperate, highland climate at the intersection of continental, oceanic, and Mediterranean influences. 1000 mm of rainfall/year. The Southern Causse region is subject to three types of wind: 1) cold, dry continental winds blowing down from the north that occur particularly during winter (called mistral); 2) ocean winds that carry winter and spring rains; and 3) warm Mediterranean winds from the south that cause storms at the end of the summer and in the fall. Summer water shortages, low winter temperatures, and the ground soils' limited capacity to retain water restrict the length of the growing season to 6 months.</p>	

Vegetation	<p>Postglacial recovery: forests of Norway pines (<i>Pinus silvestris</i>) and deciduous oaks.</p> <p>18th century: nearly the entire Causse surface area is under cultivation. Ligneous species such as box (<i>Buxus sempervirens</i>) are sought out for multiple uses (litter, fertilizing, heating, crafts, ...).</p> <p>18th and 19th centuries: increasing pressure on ligneous species to supply the fuel needs of neighbouring industries and glassworks. This intensive exploitation gives birth to the specificity of the Causses' steppe-like landscapes composed of fields, grasslands, woody grasslands, heaths, woods...</p>	
Economic activities	<p>Several types of activities and uses coexist on the site: farming, forestry, tourism, outdoor recreational activities, hunting. Agriculture is the traditional economic activity, and is expanding overall. Tourism and hospitality activities are growing (approximately 2500 houses of which half are vacation homes). Other activities (crafts, shops, economic projects in urbanized zones...) are little developed; they reflect the dual desire to maintain the current population while at the same time bringing about an increase in the number of inhabitants so that schools may remain open and the economy and life of the communes continue.</p>	
Demographics	1021 inhabitants in 1999, with a trend towards growth (+13% between 1956 and 1999).	Slightly downward trend
Property	<p>Public = 21% of total surface area; Private = 79%, very unequally distributed: 10% of land owners possess 85% of private holdings.</p> <p>Owner farming predominates: 61% of agro-pastoral lands are exploited by the farm owners or tenant farmers and therefore are secure. 22% of the cultivable surface areas and rangelands are worked without a contract or in a precarious fashion.</p>	
Recent agricultural history and landscape closure	<p>20th century: massive rural exodus, beginning of the decline of the traditional economy. Emergence of ovine dairy systems, intensification and specialisation of agricultural production from the second half of the 20th century; concentration of agriculture onto the most productive areas, neglect of rangelands. The dynamics of woody species are no longer controlled due to the abandonment of traditional practices (felling, controlled burning...); rangelands taken over by box and juniper followed by Downy oak.</p> <p>Since 1956, grassland surface areas have shrunk significantly in favour of low ligneous plants. One may expect that ligneous species consequently will continue to spread and forests will gain ground because the predominant plant formation corresponds to the first stage of a landscape closure dynamic. The preservation of pastures and associated agricultural and animal husbandry practices therefore is essential for the maintenance of open spaces. However, the decline of grasslands highlights the incapacity of animal husbandry -- as currently practiced -- to alone halt landscape closure. Programmes are being established to re-open areas overgrown by ligneous plants.</p>	

The following three maps (Figures 2, 3 &4) show the evolution of plant cover on the Causse of Larzac between 1956 and 2001. The same evolution is seen on the Causse of Blandas and Campestre-et-Luc.

Figure 2 : Vegetation in 1956

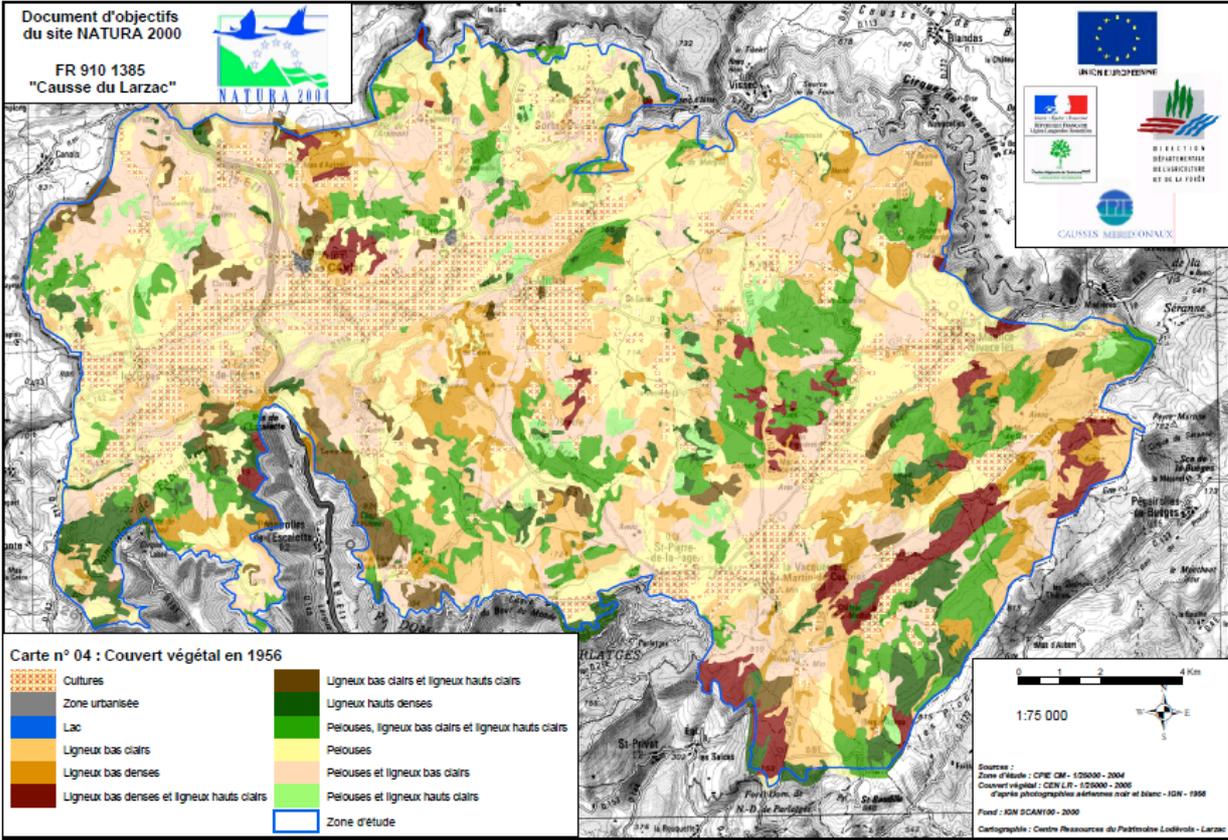


Figure 3 : Vegetation in 2001

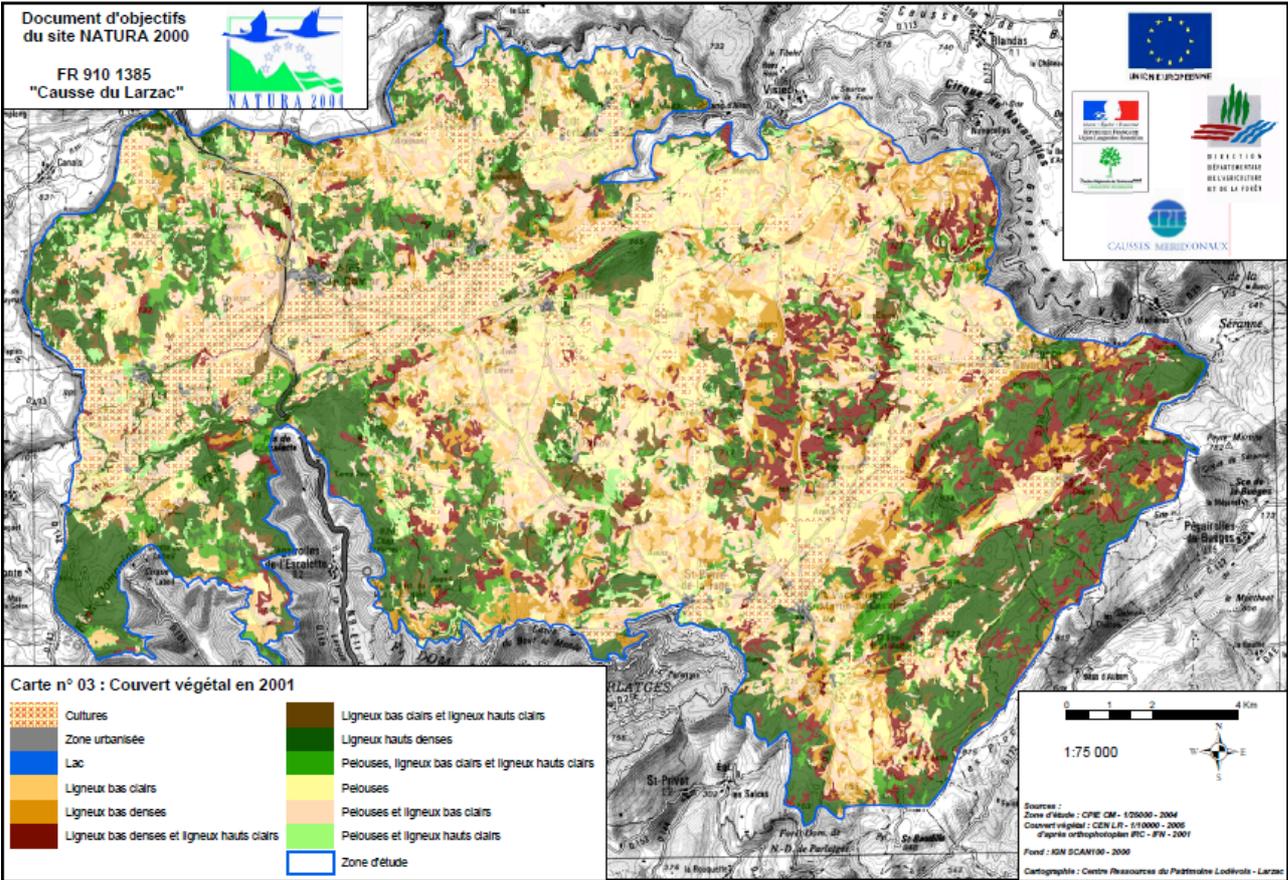
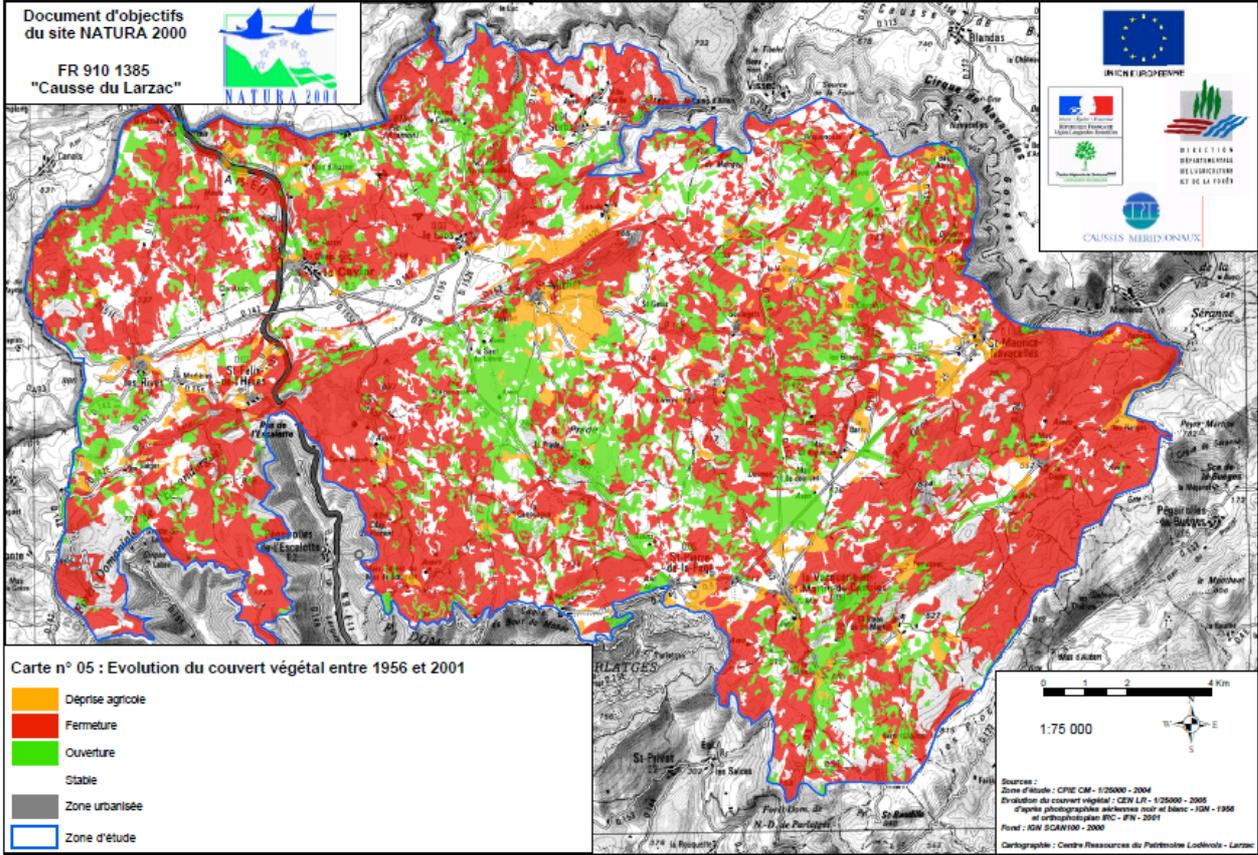
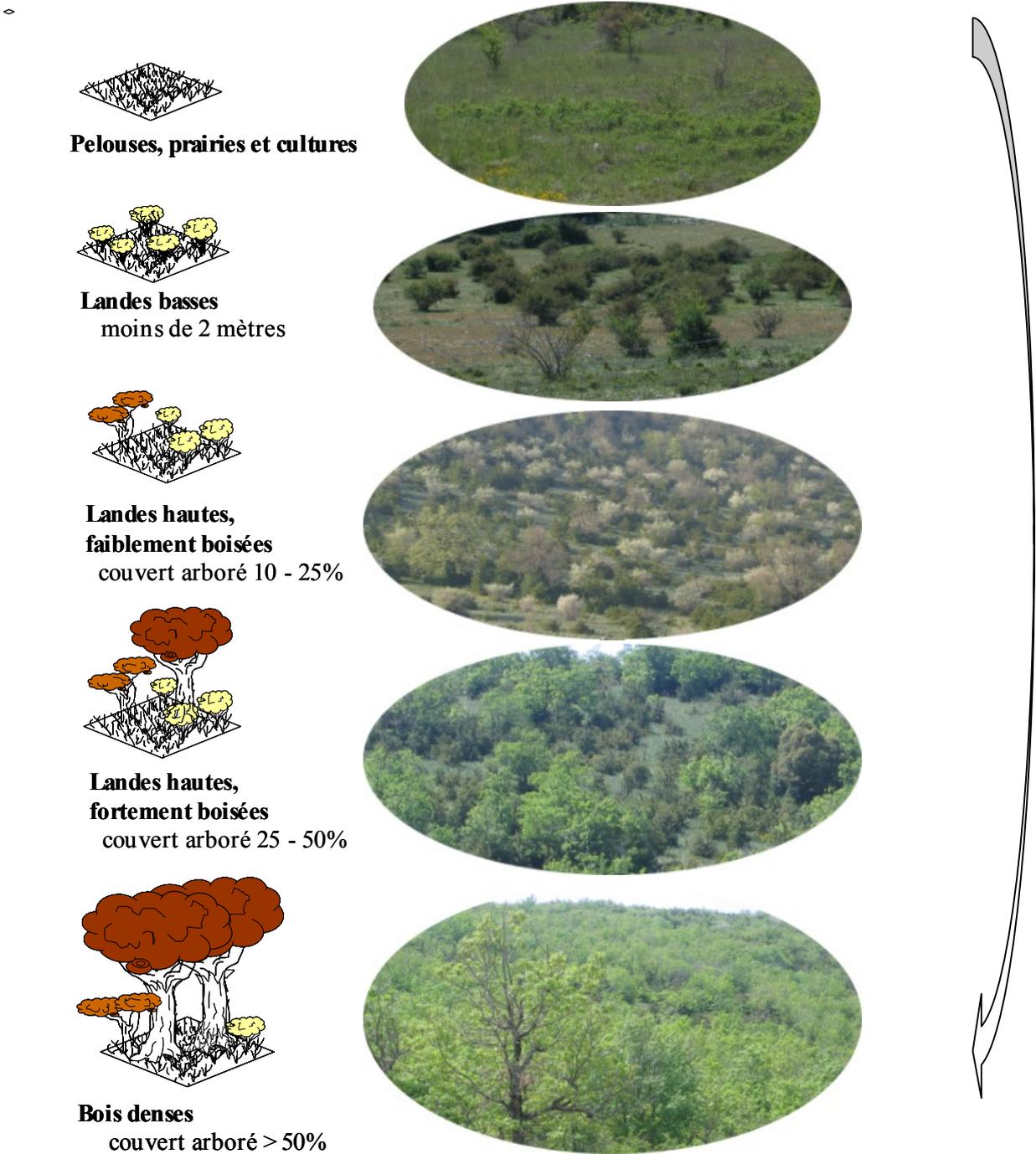


Figure 4 : Evolution of vegetation between 1956 and 2001



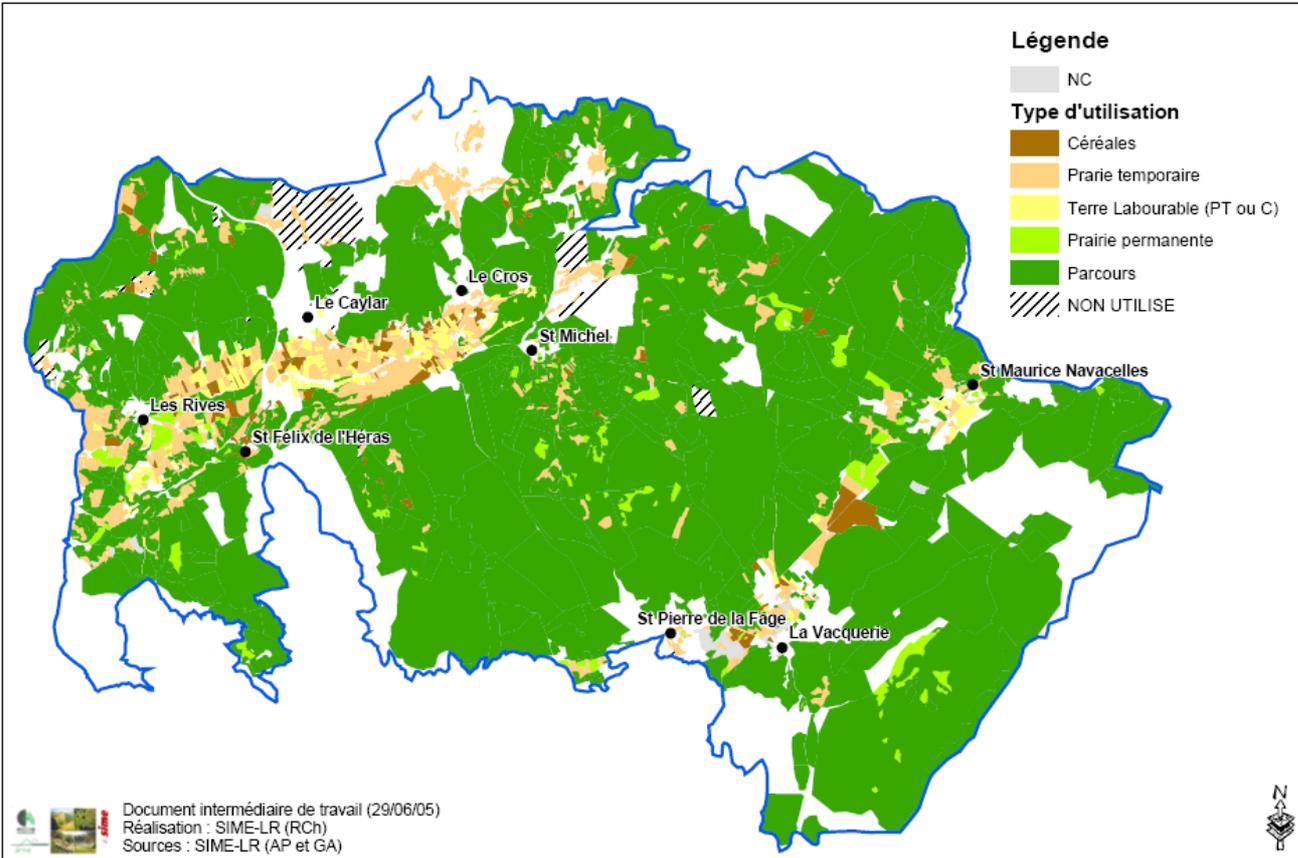
The "Centre Régional de la Propriété Forestière" (CRPF) diagram below (Cf Figure 5) illustrates this natural dynamic: grassland, the most open environment, represents the first stage of natural plant cover installation. Forests composed of dense, tall ligneous plants represent the final stage.

Figure 5 : Agriculture activity: Animal husbandry predominates, but has been changing since 1960



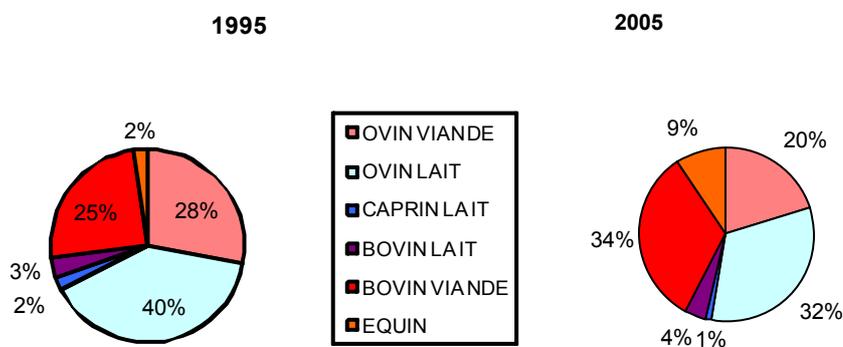
The following map shows the importance of the rangelands used for livestock and the limited surface area on the Causse of Larzac that is ploughed due to the geology. The same features are found on the Causse of Blandas and Campestre-et-Luc.

Figure 6: Land Uses



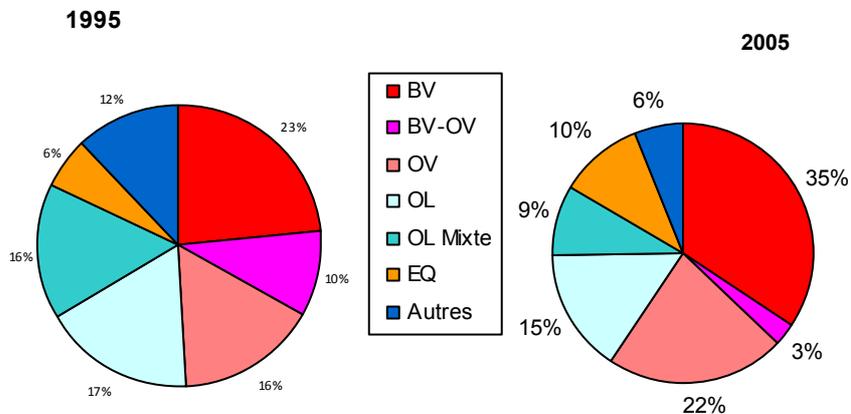
	Causse of Larzac	Causes of Campestre and Blandas
Agriculture	<p>80% of land (23 600 ha) is used for agriculture. Tillable land covers approximately 10%, permanent prairies 2%, and rangeland (grassland, heaths, and woods) 88%.</p> <p>65 farms with 14 livestock systems: 43 sedentary livestock systems, 17 500 ha, 2 425 livestock units (LU) 7 multiple crop farms, 300 ha 15 transhumance livestock farms on 4 900 ha, 660 LU.</p> <p>99 working farmers, 54% under 45 years of age.</p> <p>Reduction of sheep milk production and of heads of meat sheep (-11%).</p> <p>Very strong increase in bovine (80% of mother livestock) and equine livestock.</p>	<p>11 000 ha are claimed by farmers of which 88% are rangelands.</p> <p>26 farms, of which 24 are dedicated to livestock and 2 to plant production.</p> <p>The main products are suckler cattle (about 850 LU) followed by dairy sheep (about 250 LU or 1 695 heads) and suckler sheep (170 LU or 1130 heads + 800 summer transhumance heads). Followed by horse breeding: one farm linked in part to a leisure activity.</p> <p>From 1995 to 2001, the number of bovine cattle increased sharply while the number of sheep increased slightly.</p>

Figure 7 : Analysis of the change in the distribution of Livestock Unit (LU) by type of livestock systems Extract from DOCOB Larzac, Inventory volume, p. 69



Measured here is the impact of the spread of cattle and horse farming which together went from 27% of LU in 1995 to 43% in 2005.

**Figure 8** : Analysis of the change in the percent of surface area managed by different livestock systems Extract from DOCOB Larzac, Inventory volume, p.

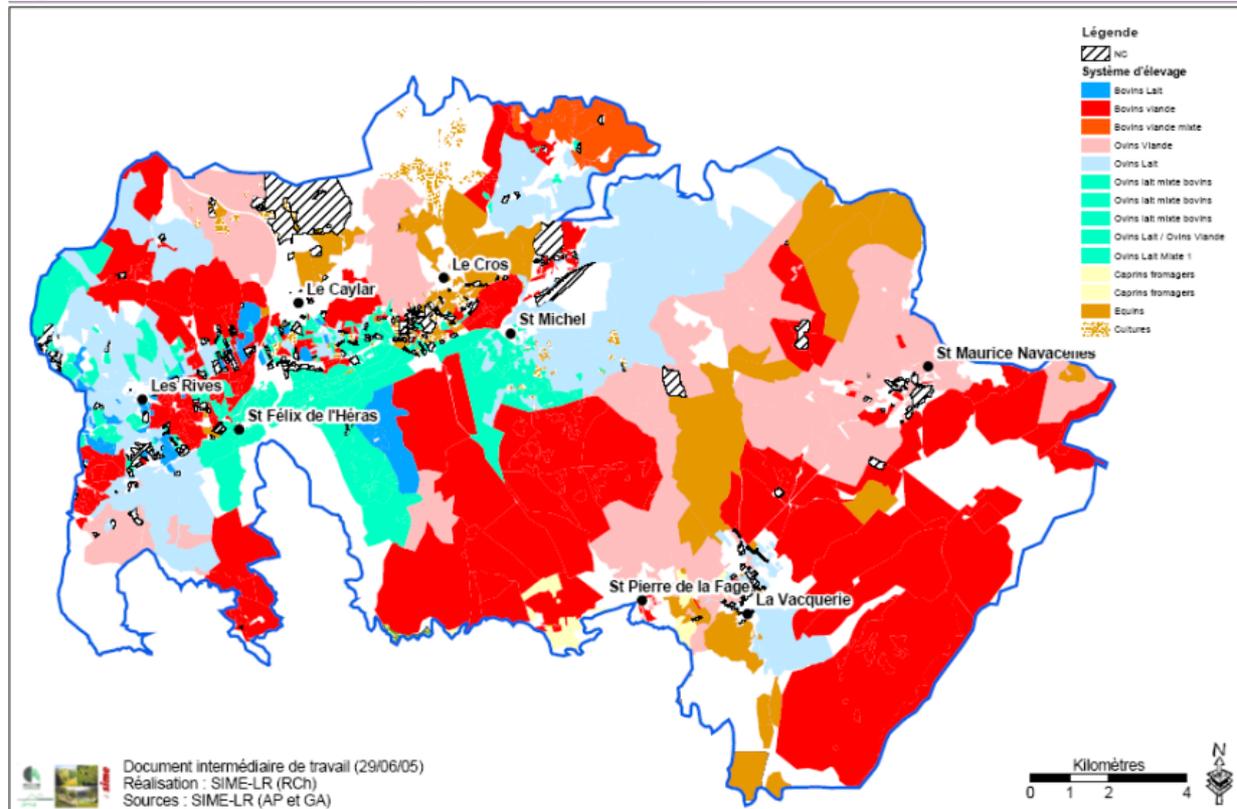


If we take into account the areas declared by farmers during various surveys, there is a clear increase (in percentage) of surface areas managed by the different livestock systems with:

- a strong increase (+22%) in the percentage of areas managed by bovine meat (BV), sheep meat (OV), and equine livestock systems (EQ).
- a reduction in the percentage of areas exploited by dairy sheep (OL), mixed milk sheep (OL Mixed) and other systems (Others), goat cheese or diversified (OV-BV) systems.

The following map shows the distribution of milk and meat production on the Causse of Larzac. The type of production is determined by the climate: to the north and west, dairy livestock predominate, while in the south and east, where the climate is drier, livestock farming is oriented around meat production.

Figure 8: Distribution of milk production and meat production on the Causse du Larzac



## 2- Agro-pastoral practices

Agro-pastoral practices contribute to the upkeep and development of areas. They save landscapes from taking on a monotonous character thanks to:

- grazing which limits the spread of ligneous plants,
- complementary maintenance work (manual, mechanical, and burning...) that complete the animals' mouth work,
- reopening clearing (flail mowing) which contributes to the recovery of areas in process of closure,
- use of cultivated areas and conservation of permanent prairies on low grounds that can provide winter food resources to herds.

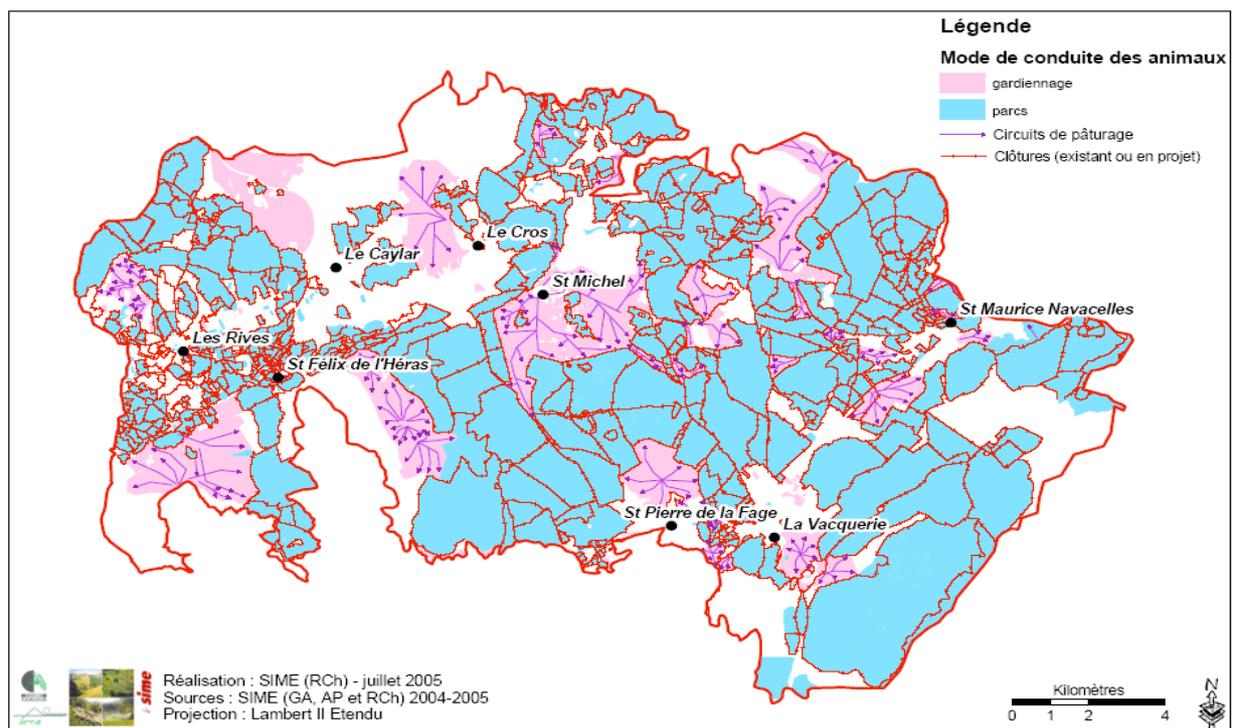
Together, this management of open areas and cultivated spaces contributes to the conservation of agro-pastoral Causse landscapes that guarantee biodiversity.

Consequently, agricultural farms are critical participants and partners in the sustainable management of the habitats, grasslands and heaths, present on the site.

Overall, agro-pastoral practices remain environmentally friendly in so far as they involve semi-extensive and extensive livestock systems using few inputs (fuel, fertilizers...).

During the 1970s and 80s, dairy systems went through an intensification phase and fell back on the most productive fodder areas to the detriment of rangelands. Today, the trend has been reversed with the remobilization and grazing of rangeland parks. In 2005, over 79% of pasture lands were fenced. Only some dairy sheep herds and transhumant sheep continue shepherded grazing (see map below). There is a strong increase in numbers of heads while the surface area of rangelands is stagnating: the load per hectare of rangeland is increasing (on the Larzac plateau, from 0.11 LU/ha to 0.13 LU/ha).

Figure 9: Herd management modes



Nevertheless, certain grazing practices on large parks covering several dozen to several hundred hectares over long periods (several weeks or even months) leads one to suspect that an unfavourable evolution in vegetation is possible, translating into:

- an under-use of less appetizing vegetation (heath false-brome *Brachypodium pinnatum*, woody plants...) or of areas that are difficult to access, leading to the risk of overgrowth,
- an overgrazing of the grassiest, most easily accessible areas with the risk of degrading low grasslands and heaths.

This can be observed in certain parks managed according to "ranching" livestock farming methods.

### 3 The other uses of the territory:

Activities	Causse of Larzac	Causses of Campestre and Blandas
Public forests	<p>1600 ha of public forests: communal (1/3) and national (2/3).</p> <p>In national forests, softwoods are in a minority; Downy oak and residual beech bushes are well represented. In communal forests, the open spaces that once dominated have shrunk in favour of mixed formations resulting from the establishment of softwoods and bushes. Downy oak is fairly localised and some softwood plantations have been standing for 60 years. A management plan has been drawn up for each communal forest to preserve the biology and landscape and the production of wood (softwood).</p>	<p>7880 ha of which 1300 ha are public forests: communal (1/3) and national (2/3).</p> <p>The majority of the public wooded area is covered with hardwood (54% versus 46% softwood). Black pine predominate, followed by oak.. 29% of public forests have a production potential in: firewood (hardwood) and industry (softwood), 36% are dedicated to protecting land and landscapes. 35% of the public area is not wooded (heaths, scree and cliffs).</p>
Private forests and silvopastoralism	<p>Privately owned forests represent over 75% of the total forest area. Ownership is very unequally distributed: 11% of the owners hold 80% of the forest.</p> <p>Downy oak predominate, principally in stands that are relatively dense, aged 60 years or more. Overall, brute production and volume per hectare is very low. These low volumes are due in part to:</p> <ul style="list-style-type: none"> <li>- difficult growing conditions (particularly soil and climate)</li> <li>- the high proportion of sparse, open and grazed stands</li> <li>- the relative "youth" of the stands in place</li> </ul> <p>No professional forestry business (sawmill, woodwork, construction wood, forestry exploitation or works enterprises, engineering firms...) are listed in the study area.</p> <p>While the forestry potential definitely is low in the Causse region, what does exist is nevertheless underexploited. This under exploitation is reflected in strictly forestry terms (firewood, clearings, thinning out...) as well as in relation to agricultural and animal husbandry activities (silvopastoral clearings, truffle silviculture, wood chips for heating...).</p> <p>As the Causse highland spaces were predominately used for agriculture and animal husbandry, the forest assumed above all a complementary role to these practices.</p> <p>The woods traditionally were managed for a silvopastoral use, with people responsible for removing deadwood, clearing undergrowth and maintaining</p>	

	<p>clearings. Oak also was fully exploited for fuel and lumber. While this multi-use forest management has today diminished or disappeared, the importance of wooded areas in farming systems still holds true.</p> <p>Strong demand still in fact exists for these areas; in summer, the woods provide shade, protecting grass from the heat (as well as providing the "leaves" of Downy oak), in winter, grass still standing in the woods and fallen acorns may be consumed. It is this "buffer" character of forest areas that is appreciated, as is the capacity of these areas to offer complementary food (by maintaining standing grass longer, fodder production that is spread out longer, acorns) and shelter.</p> <p>The woods, relatively dense, are therefore areas that are principally used during critical periods (dry summers and bitter winters). Their pastoral use is in high demand, even if this demand is not always expressed and depends above all on weather conditions and the way the herds are managed.</p>
Tourism and outdoor activities	<p>The tourism attractions are the well known natural sites (the Cirque of Navacelles), the beautiful and diverse natural environment, the strong historical identity linked to Protestantism, high quality regional produce, and a rich architectural heritage. Outdoor recreational activities are increasingly popular. The Causse area is attracting a large clientele from nearby areas (Nîmes, Montpellier) but there is an insufficient amount of lodging.</p>
Hunting	<p>Hunting, a very old practice for the inhabitants of the Causses, has no negative impact on the ecological equilibrium as long as the rules in force are observed.</p>
Biodiversity conservation	<p>The Causses are integrated into the Natura 2000 network, a set of sites managed at the European level that aim to conserve biodiversity. On the Causses, the majority of the habitats and species are linked to open environments - environments that are a result of human activities (deforestation, animal husbandry...). The objectives in the Causse region therefore are to ensure the maintenance of agro-pastoral activities.</p>

#### **4 The Southern Causse Environment Initiative Centre (CPIE -Centre Permanent D'Initiatives pour l'Environnement):**

1994: elected officials, agriculture and forestry socio-professionals, and associations working in the fields of nature conservancy, hunting, and environmental education decide to manage the Southern Causse territory in a coordinated fashion: creation of the Southern Causse Association (*Association des Causses Méridionaux - ACM*). ACM became CPIE in 2002.

1994: CPIE undertakes an agro-environmental study and implements a communications programme: the closure of open landscapes (grasslands, *pelencs*, and heaths) by ligneous plants is the priority issue, and one shared by the entire territory. This negative evolution of open areas concerns everyone: farmers and livestock breeders (loss of grass resources), hunters (surplus development of large game), elected officials and tourism professionals (loss of landscapes emblematic of the Causse region). CPIE experiments with open area restoration techniques on 270 ha spread over 21 farms.

1997: CPIE reinforces its open area renovation and management efforts: 473 ha on 31 farms. It deepens its knowledge of the territory: mapping of natural areas, studies of special animal and plant species.

2000: CPIE's resources are augmented and it broadens its field of action to sustainable development through the creation of 3 activity centres:

- "Territorial development" centre, which is responsible for agro-environmental projects and Natura 2000 sites;
- "Environmental awareness and education" centre that undertakes outreach activities, hosts field study classes...
- "Agriculture/environment/heritage" resource centre that capitalizes and valorizes knowledge to use in environmental outreach and education with a GIS, educational publications.

2006-2007: search for rural development models that are reactive, coordinated, and sustainable, aiming to maintain and develop agricultural, animal husbandry, forestry, and tourism activities over the long term in harmony with environmental objectives.

Three priorities are identified:

- development of sylvopastoralism, the multiple functions of the forest, and study the potential to develop sub-products of silvopastoralism through the Wood-Energy sector.
- agriculture land and uses: support the taking over or the sale of intact farms, ones that are not broken up, to promote the installation of farmers and the development of lands.
- weather hazards and the conservation of water resources: renovation of watering holes, karst pools, tanks...

2009: CPIE argues for the classing of the *Causse*s as a UNESCO world heritage site under the label "Landscape produced by agro-pastoralism".

CPIE operates on a collegial basis, with 3 colleges on its governing board: the college of elected officials, the college of socio-professionals (agricultural, forestry...), the college of associations (nature conservancy, hunters, culture...). A technical committee of 30 individuals from these 3 colleges is in charge of making technical proposals to the board, which in turn is responsible for validating them. When a programme is

planned, the most competent project holder is chosen from the structures represented on the governing board.

### **5 Bibliography and Internet sites:**

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- \* DOCUMENT D'OBJECTIFS SUR LES SITES NATURA 2000 FR 101382 DU CAUSSE DE CAMPESTRE-ET-LUC et FR 9101383 DU CAUSSE DE BLANDAS, 2005, CPIE
- \* CPIE, Opération Collective d'Aménagement et de Gestion de l'Espace Rural (OCAGER) : « Programme de gestion des espaces agricoles, pastoraux et forestiers sur le Causse du Larzac » Phase 1, 2006,
- \* CPIE, Les causses méridionaux, un territoire pastoral garant de biodiversité, 2007
- \* ITOVIC, Petit lexique pastoral, 1991
- \* CERPAM, Guide pastoral des espaces naturels du sud-est de la France, 1996.
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- \* Njwe, R.M. Strategies for matching feed resources to small ruminant needs: A review - Evaluation des stratégies visant a faire correspondre les ressources fourragères aux besoins des petite ruminants, Department of Animal Science, Dschang University Centre, Dschang, Cameroon
- \* Sollenberger, L. E Vendramini, J.M. B. 2008. Grazing Management Concepts and Practices,, and Y. C. Newman, FAO,
- \* Sanz Cortés, Rocio, 2003.Terminologie Utilisee Dans La Recherche Sur Les "Systemes D'agricultures Familiales"/ Terminology Used In "Family Agriculture Systems" Research, Novembre CIRAD-TERA n° 49/2003

Internet sites :

[www.languedoc-roussillon.ecologie.gouv.fr](http://www.languedoc-roussillon.ecologie.gouv.fr)

[www.natura2000.ecologie.gouv.fr](http://www.natura2000.ecologie.gouv.fr)

[www.europa.eu.int/comm/environnement/nature](http://www.europa.eu.int/comm/environnement/nature)

[www.ecologie.gouv.fr/languedoc-roussillon/milieus/sommaire\\_milieus\\_especes.htm](http://www.ecologie.gouv.fr/languedoc-roussillon/milieus/sommaire_milieus_especes.htm)

[www.foretriveefrancaise.com](http://www.foretriveefrancaise.com) (fiches d'itinéraires techniques sylvopastoraux)

[www.inst-elevage/asso.fr](http://www.inst-elevage/asso.fr)

[www.ifn.fr](http://www.ifn.fr)

<http://simelr.free.fr>

## 6 Glossary

**"Capitelles" (or "Cazelles"):** small stone huts built by farmers or shepherds to provide shelter during storms and store their tools.

**Cheese ovine:** sheep milk production to make cheese on the farm and the sale of these cheeses.

**"Clapas":** stone mounds piled in the middle of crop fields during maintenance.

**Document d'objectifs (DOCOB):** document that concretely determines the management modes of Natura 2000 sites. It must conciliate the sustainable conservation of natural habitats and prime species with economic, social, and leisure activities.

**Grassland:** Low plant formation dominated by grasses.

**Heath:** Relatively open formation where low ligneous plants cover from 40 to 60% of the surface area. The underlying grass cover is discontinuous.

**High ligneous plants:** Stratum of vegetation composed of plants over 2 m tall.

**"Jasse":** local term meaning sheepfold

**Karst pool (or temporary water hole):** basin often with a muddy bottom, at times paved around the edges, collecting and storing rainwater for herds.

**Karstic:** Relief particular to limestone regions resulting from the effect of largely subsurface water dissolving calcite. This results in the formation of caves, swallowholes, sink-holes, etc.

**Low ligneous plants:** Stratum of vegetation composed of plants of 50 cm to 2 m tall.

**Livestock Unit (LU):** the equivalent of one adult cow grazing 4500 kg of dry fodder over one year.

**Milk ovine:** On the Causse, sheep milk production destined for delivery to Roquefort (cheese industry).

**Natural habitat:** plant group distinguished by geographic, physical and biological characteristics, whether these be natural or semi-natural.

**"Pelenc":** grasslands in the process of being overgrown. In Occitan, the term "*pelenc*" means rangeland.

**Rangeland:** Natural plant formation grazed by animals with easy entry access.

**"Ségalas":** Sandy-loam-argillaceous soil, deep with a good water capacity (most fertile land on the Causses)

**Species habitat:** natural habitat in which a species lives at one stage of its life cycle, and for all vital activities (reproduction, feeding, etc.).

## 7 Acronyms

ACM	Association des Causses Méridionaux
CAD	Contrat d'Agriculture Durable
CBPS :	Code des Bonnes Pratiques Sylvicoles
CC :	Communauté de Communes
CDA :	Chambre Départementale d'Agriculture
CEN LR	Conservatoire des Espaces Naturels du Languedoc-Roussillon
CG	Conseil Général
CR	Conseil Régional
CRPF	Centre Régional de la Propriété Forestière
DATAR	Délégation à l'Aménagement du Territoire et à l'Action Régionale
DDAF	Direction Départementale de l'Agriculture et de la Forêt
DDE	Direction Départementale de l'Équipement
DDEAT	Direction Economique et de l'Aménagement du Territoire
DIREN	Direction Régionale de l'Environnement
DOCOB	Document d'objectifs
EARL	Exploitation Agricole à Responsabilité Limitée
EPCI	Etablissement Public de Coopération Intercommunale
FEDER	Fonds Européen de Développement Régional
FEOGA	Fonds Européen d'Orientation et de Garantie Agricole
FGMN	Fonds de Gestion des Milieux Naturels
FNADT	Fonds National d'Aménagement Du Territoire
FSE	Fonds Social Européen
IFN :	Inventaire Forestier National
LIFE	L'Instrument Financier Européen
LU	Livestock unit (Unité Gros bétail UGB in French)
MAE	Mesures Agro-Environnementales
MAAPAR	Ministère de l'Agriculture, de la Pêche, de l'Alimentation et des Affaires Rurales
MEDD	Ministère de l'Écologie et du Développement Durable
OCAGER :	Opération Concertée d'Aménagement et de Gestion de l'Espace Rural
OGEC :	Organismes de Gestion et d'Exploitation en Commun
ONCFS	Office National de la Chasse et de la Faune Sauvage
ONF	Office National des Forêts
PAC	Politique Agricole Commune

PHAE	Prime Herbagère Agro-Environnementale
POS	Plan d'Occupation des Sols
PMPVA	Prime Vache Allaitante
PSBM	Prime Spéciale Bovin Mâle
PSG	Plan Simple de Gestion
RGA :	Recensement Général Agricole
RTM :	Reboisement des Terrains en Montagne
SAFER	Société d'Aménagement Foncier et d'Etablissement Rural
SCEA	Société Civile d'Economie Agricole
SCOT	Schéma de Cohérence Territoriale
SERFOB	Service Régional de la Forêt et du Bois
SIC	Site d'Intérêt Communautaire
SIME :	Service Interchambre Montagne-Elevage
SRGS :	Schéma Régional de Gestion Sylvicole
SMI	Surface Minimum d'Installation
SIME	Service Inter-chambres d'agriculture Montagne Elevage
SIVOM	Syndicat Intercommunal à Vocation Multiple
UTA	Unité de Travail Annuel

## ANNEX N° 1 Property status of rangeland (extract from OCAGER 2006, CPIE)

It can be difficult to sort through all of the applicable legal references (rural rules, forest rules, environmental rules...) when some rangelands that are in the process of closure, or which have become "wooded plots", are the subject of rural leases or multi-annual grazing agreements. Legally, a lease statute is not applicable to wooded plots (Art.L.411-2 of the Code Rural). Concretely, this can lead to difficulties, and indeed conflicts, over the development of these areas. This is particularly true between some land owners (today *de facto* forest owners as these areas naturally reforest) and some livestock breeders/farmers/tenant farms possessing leases or agreements over these lands that once were little forested and are in great demand as rangeland. These difficulties result principally from the juridical, property, or fiscal statutes of some plots which still are listed on the land register as "heaths" but which have long since taken on a forest character or at the least a wooded character.

Given this situation, certain precisions are required:

### ◆ regarding the land register

This is **uniquely a fiscal document**. The **kinds of crops** reported on the matrix of the land register are not proof of actual reality. Furthermore, land owners theoretically are required to **declare any and all change**.

### ◆ regarding the concept of "wooded state"

This is very **difficult to appreciate** on the Causse due to the strong forest reconquest dynamic underway and the mosaic overlapping of stands from grasslands up to dense coppice. We shall apply in this study the concept of a wooded state given by IFN (extract from the inventory of Hérault - 1996):

*Woods formations principally are made up of trees and bushes corresponding to the conditions that define a wooded state or wood use:*

- *they should belong to wood species*
- *they should possess a forestry form, namely a relatively straight, individualized stem that branches out at a certain height (about 1.5 m)*
- *cover belonging to registrable forest trees must occupy at least 10% of the surface area, or, in the case of young, unregistered forest trees (saplings), have at least 500 stems per hectare, well spaced (average spacing):*
- *the stand must have a minimal surface area of 0,05 hectares (with a treetop width > 15 m)*

### ◆ regarding the set of legal rules applicable to land contracts involving woods

Article L. 411-2 of the rural code stipulates that "*the dispositions of article 411-1 (defining when tenant farming status is applied) are not applicable (..) to concessions or agreements concerning the use of forests or goods subject to forest rules,*

*including those pertaining to agriculture and animal husbandry". However, the law does not formally prohibit the application of tenant farming on wooded plots. It is furthermore frequent that tenant leases include wooded areas.*

The law on the Development of Rural Territories (2005-157, February 2005) changed the forestry code in this sense (Art. L 146-1) as from then on, *"when the demand for a grazing concession concerns a seasonal, extensive pastoral use, a multi-annual grazing agreement is reached adhering to the form and conditions foreseen in articles L.481-3 and L.481-4 of the rural code"*.

One may therefore accept that an "intermediary", silvopastoral status may arise in the form of a multi-annual agreement with indications regarding desired uses (grazing dates, load, non-use periods...) that would notably guarantee the maintenance of the wooded state.

◆ **regarding the Simple Management Plans (PSG) and grazing use**

The Simple Management plans are reference documents intended for the sustainable management of private forests. They are required for all private forest estates of over 25 hectares owned by one tenant and may be presented on a voluntary basis for estates over 10 hectares. The owners can write them themselves or ask for help from a specialist (cooperative...) or an expert.

This document is established for a period of between 10 and 20 years.

It includes, among other items, a description of the stands, the management orientation of the owner and the planned cutting and works programmes.

A silvopastoral objective is one of the possible management orientations of forests in the region. Therefore, there is no conflict between PSGs and animal husbandry, to the contrary, there is even a complementarity once the maintenance of woods is guaranteed by specified pastoral practices, for example, in a multi-annual grazing agreement.