



**Biodiversity in Catalonia**  
the challenge  
of conservation



Generalitat de Catalunya  
Departament de Territori  
i Sostenibilitat



## The conservation of biological diversity, a shared duty

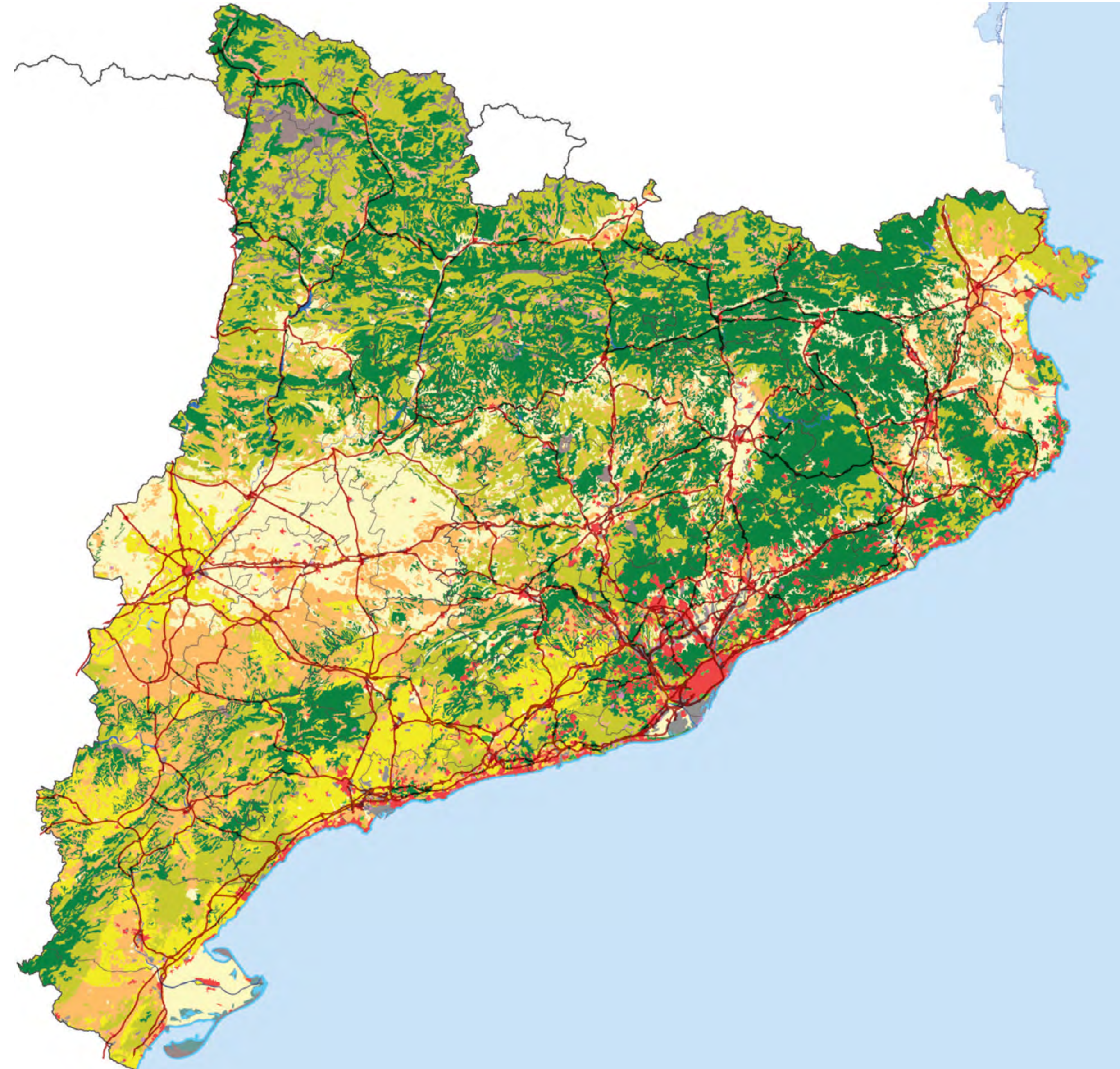
In Catalonia, the conservation of natural heritage is carried out within the framework of the principles of the [United Nations Convention on Biological Diversity \(CBD\)](#), and is also in line within the [European Union Biodiversity Strategy to 2020](#). The [Aichi Biodiversity Targets](#), adopted in 2010 in Nagoya, during the United Nations Biodiversity Summit, laid down ground rules for changing the course of the current development path in order to ensure the conservation of habitats and species, as well as the maintenance of environmental goods and services and the efficient use of natural resources. The challenge is to develop these global objectives derived from the CBD at a local level, and to promote the corresponding government action, within the framework of the [Plan of Action on Sub-National Governments, Cities and Other Local Authorities on Biodiversity 2011-2020](#). By becoming involved in these international strategies and guidelines, Catalonia is finding areas of shared experiences and thus enriching its own biodiversity strategy.

# Biodiversity in Catalonia: the challenge of conservation

Catalonia contains examples of different types of European landscape, albeit on a small scale. In an area of little more than 30,000 km<sup>2</sup>, there is a wide variety of substrates, soils, climates, orientations, altitudes and distances from the sea. Combined, these elements provide Catalonia with great ecological diversity and a remarkable wealth of landscapes, habitats and species. There are over 600 types of [natural and semi-natural habitats](#).

65% of the territory conserves a high degree of natural features. However, it is very vulnerable because of the pressures it is subject to.

Over 7 million inhabitants are concentrated in 30% of the territory, mainly near the coast. In addition to Catalonia's intense agricultural, stockbreeding and industrial activities, many tourists visit the area—over 20 million each year—and there is a high level of dispersed urban development as well as a dense network of road infrastructures. The pressure generated by this lifestyle model means that the country's ecological footprint exceeds the biocapacity of its administrative area.



Land cover (CORINE, 2006)

# Knowledge for sustainable conservation and management

The response to pressures of this type and intensity gives rise to actions in the spheres of knowledge, conservation and the sustainable use of the natural heritage.



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# Knowledge

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# We organise the information on natural heritage

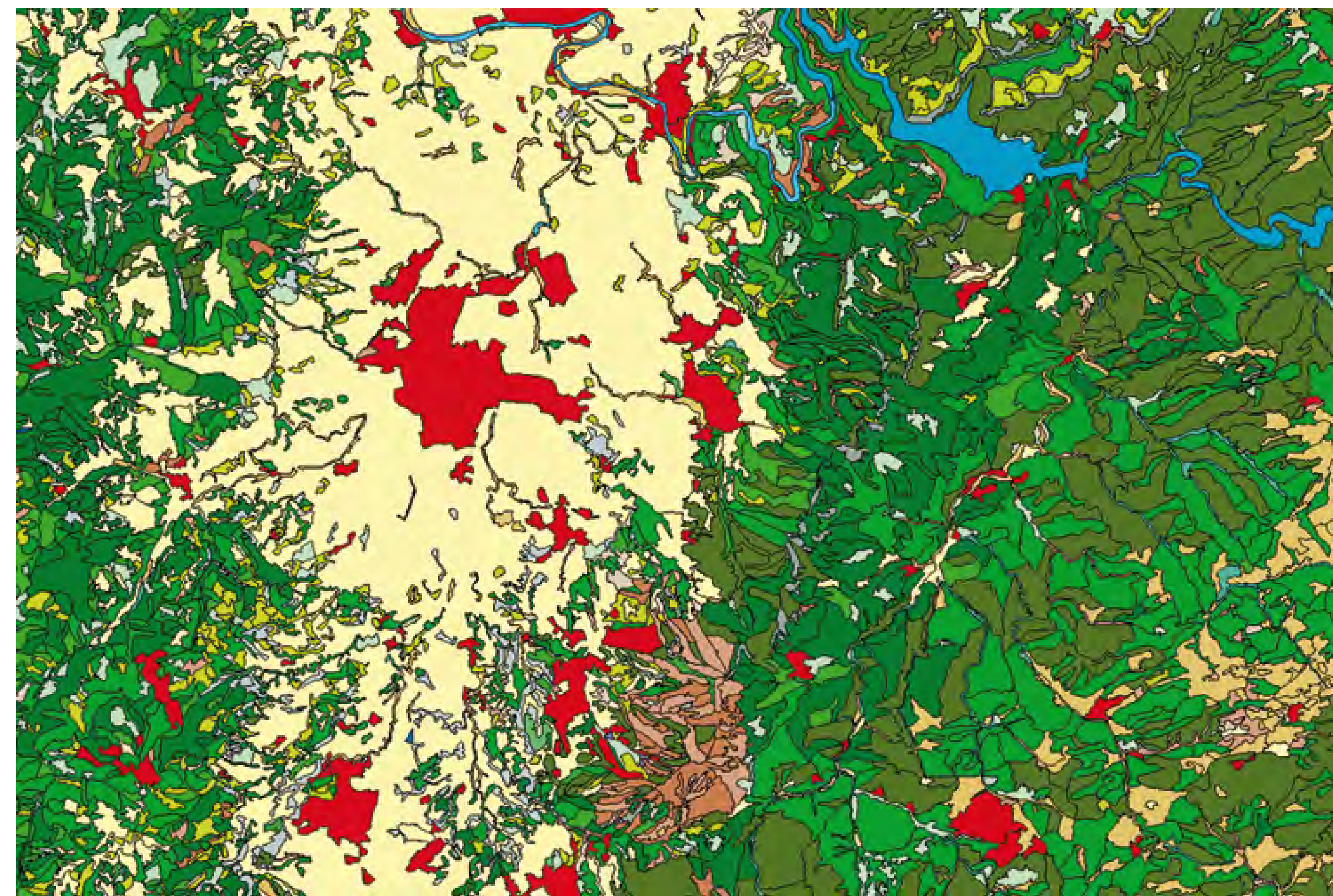
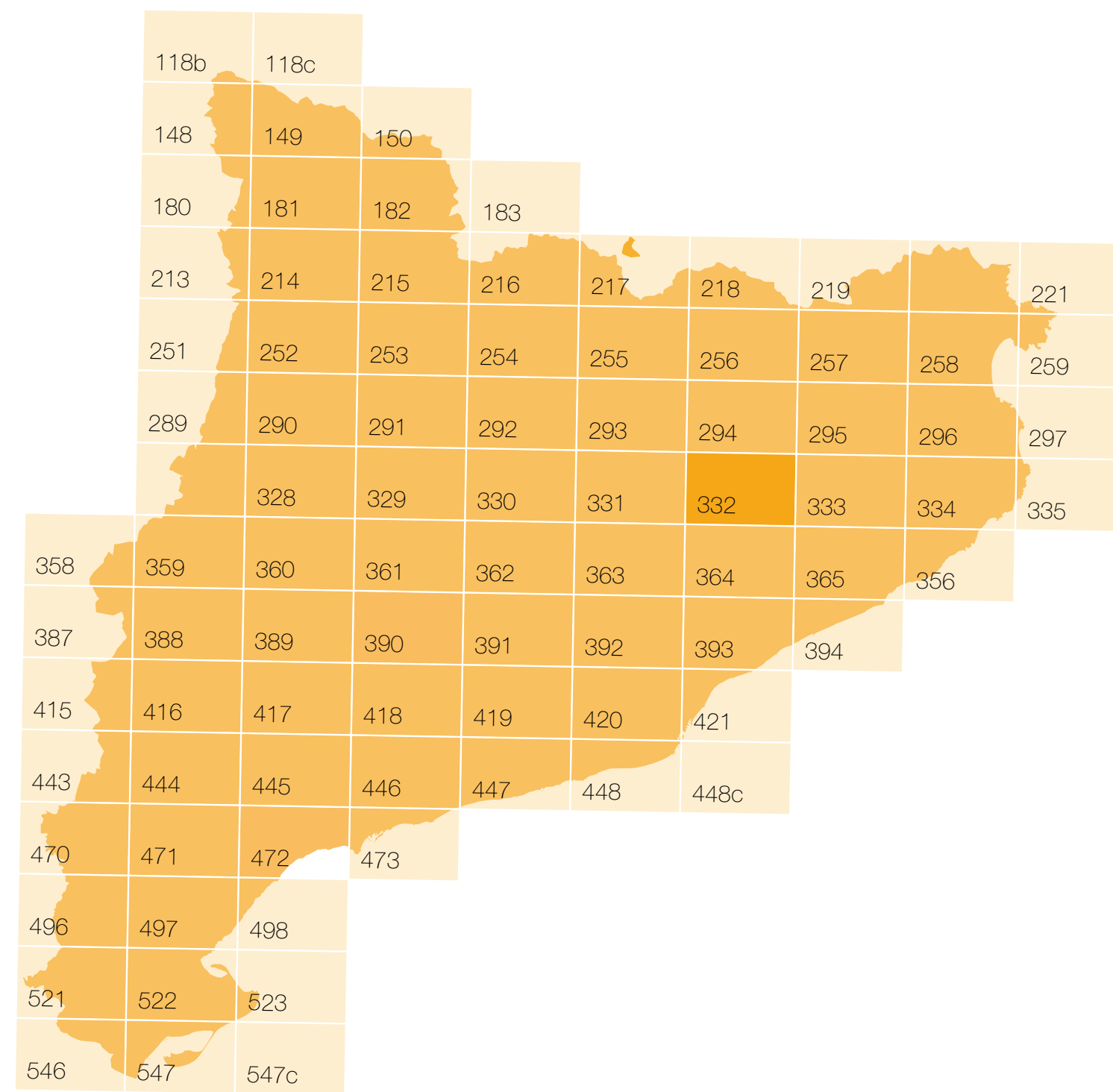
## Mapping of habitats in Catalonia

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The [Map of Catalan Habitats](#) project, carried out in collaboration with the University of Barcelona between 1998 and 2006, provides information based on the interpretation and adaptation of

the classification of European Union habitats in the CORINE Biotopes Manual. This allows for the mapping of over 600 different units at a scale of 1:50.000. The second phase of this

project began in 2007. It is more precise in terms of planimetrics as well as being more informative, revealing the changes that have taken place.



- Medi marí
- Entrades de mar terra endins
- Plans costaners arenosos o limosos
- Matollars i formacions herbàcies de sòls salins o guixencs
- Platges arenoses i dunes
- Platges de còdols
- Penya-segats i costes rocoses
- Illots i farallons
- Aigües dolces estagnants
- Aigües salabroses o salines, estagnants
- Aigües corrents
- Bosquines i matollars de muntanya i de llocs frescos de terra baixa
- Bosquines i matollars mediterranis i submediterranis
- Matollars xeroacànics de les terres mediterrànies càlides
- Prats basòfils secs de terra baixa i de la muntanya mitja
- Prats acidífils secs
- Prats (i comunitats afins) d'alta muntanya
- Herbassars, jonqueres i prats humits
- Prats de dall i pastures grasses
- Bosc de caducifolis, planifolis
- Bosc de aciculifolis
- Bosc mixt de caducifolis i coníferes
- Bosc i bosquines de ribera o de llocs molt humits
- Bosc escleròfil
- Vores d'aigua i altres hàbitats inundats
- Molleres
- Tarteres
- Roques no litorals
- Congestes permanents i glaceres
- Conreus herbacis
- Conreus llerjosos i plantacions d'arbres
- Parcs urbans i jardins
- Ciutats, pobles i àrees industrials
- Camps abandonats, ermots i àrees ruderals
- Basses i canals artificials
- Àrees talades o cremades
- Pastures intensives

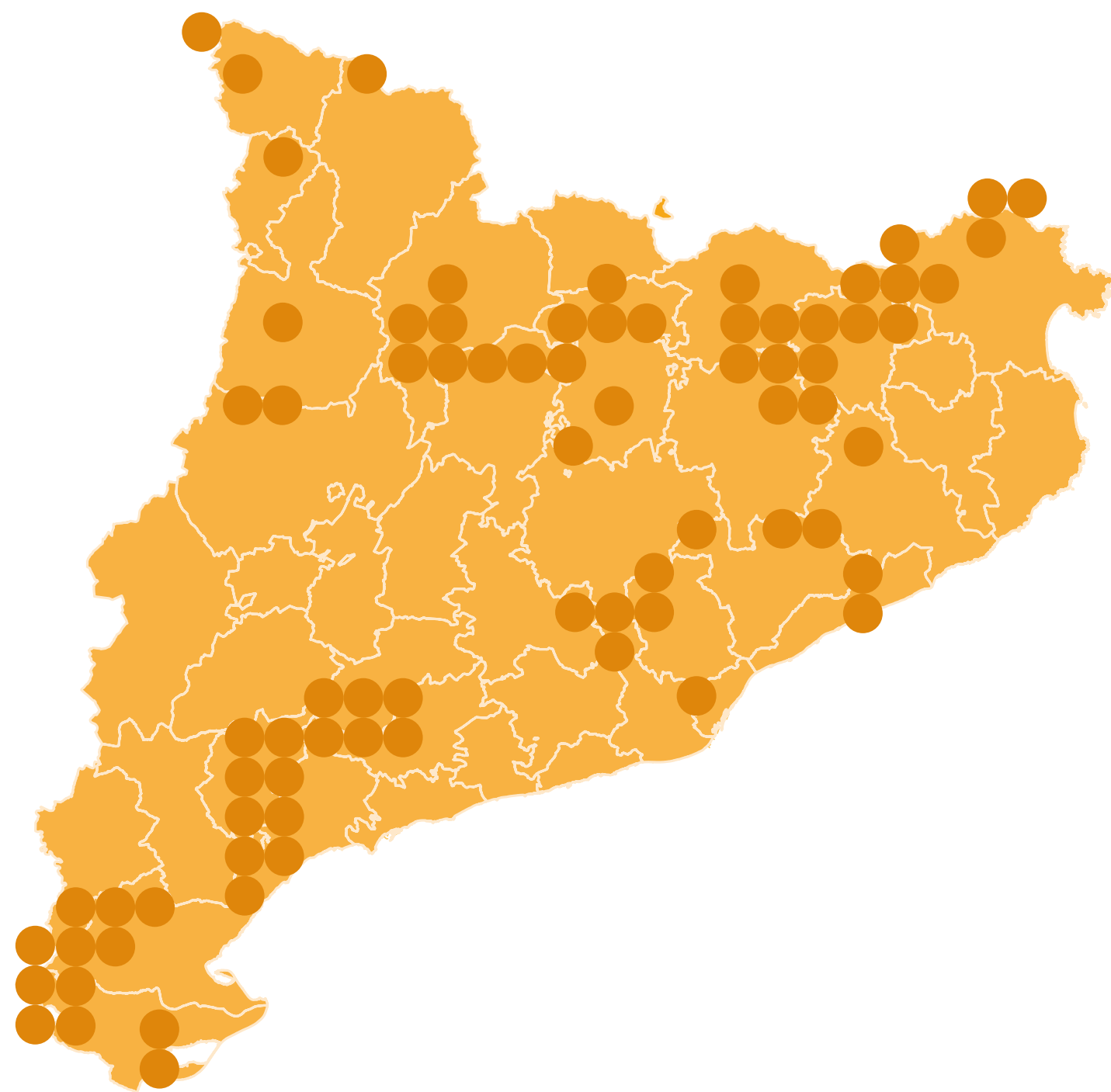
## We organise the information on natural heritage Catalan Biodiversity Database

◀ Index

The [Catalan Biodiversity Database](#) is a tool for increasing our knowledge and improving the management and diffusion of biodiversity. It contains information

on all the species identified in Catalonia, including data on their distribution, ecology and biology, in addition to their levels of threat, rarity and endemism.

A series of applications facilitates the practical exploitation of this statistical information. There are data on around 25,000 species.



**EDBC** *Taxus baccata*

Família:  
Taxaceae

Noms populars:  
teix, teixera

Codi d'espècie:  
000079

Forma biològica:  
MP peren.

Ecologia:  
boscos ombrívols

Estatges altitudinals:  
est. montà

Distribució al Principat:  
Pirineus i t. olostàtic i catalanídic

Freqüència:  
bastant rar

Distribució biogeogràfica:  
Lareeur.

Observacions:  
fulles tòxiques, aril com

Floració:  
III - IV

Distribució altitudinal:  
500 - 1.800 m s. m.

Adscripció fitosociològica:  
Fagetalia

Mida:  
5 - 15 m.

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## We organise the information on natural heritage Inventory of areas of geological interest

◀ Index

Created in 1999 as the result of a collaboration agreement between the Government of Catalonia and the Autonomous University of Barcelona, the [Inventory of Areas of Geological Interest in Catalonia \(IEIGC\)](#) is a selection of geological outcrops and areas of interest, which reveal the geological history of Catalonia. Specialists from all over Catalonia have contributed to this work and collaborated in the gathering and summarising of information on the outcrops of particular interest in Catalonia. This document serves as a reference for making decisions regarding land-use planning and management. In addition to mapping information, a descriptive fact sheet has been created for each of the 157 elements of geological interest identified.



## We assess the components of natural heritage

Assessing the status of various components of natural heritage (species, habitats and geotopes, as well as natural systems and areas), allows management efforts to be prioritised and targeted properly.

- ▶ Assessment of the threat level and the conservation status of habitats
- ▶ Endangered species
- ▶ Applied research into natural systems



## We assess the components of natural heritage

### Assessment of the threat level and the conservation status of habitats



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Habitat conservation constitutes a key parameter for land-use planning. It depends on the intrinsic value of each habitat, in addition to its conservation status and any threats it faces. The assessment of threat levels and conservation status in the CORINE habitats in Catalonia, carried out in collaboration with the University of Barcelona, has allowed the most vulnerable terrestrial and marine habitats, which are in greatest need of conservation, to be identified. These include calcicolous grasslands, mixed deciduous forests on rocky, shady slopes and pedunculate oak forests. The marine habitats include rocky, infralittoral calcified trottoirs (pavements) of *Lithophyllum byssoides*.



## We assess the components of natural heritage Endangered species

◀ Index

Knowledge of the endangered species in Catalonia, including their classification and distribution, is a key requirement for land-use management and the management of protected natural areas. The [Catalogue of Endangered Flora of Catalonia](#) includes over 180 endangered or vulnerable species, for which the distribution is known. Approved in 2008, this list is currently being expanded to include [fungi](#), [lichen and bryophyte](#). There is also a list of over 100 [invertebrate species that require conservation measures in Catalonia](#). In addition, the Catalogue of Endangered Fauna is currently in the process of being approved.

The basic aim is to provide a regulatory protection status for species that require it, beyond the general regulations they are already covered by.



## We assess the components of natural heritage Applied research into natural systems

◀ Index

The [Centre for Ecological Research and Forestry Applications](#) is a public research centre, in which the Government of Catalonia as well as various universities and research centres participate. It aims to generate knowledge and develop innovative tools in the field of terrestrial ecology. To date, its work has included the assessment of the effects of current and future disturbance to natural systems, and the examination of the effects of global climate change on natural habitats and systems. The products and services it generates include the analysis of environmental risks, the establishment of environmental monitoring networks, the development of environmental indicators and the modelling of ecological and environmental dynamics. Of particular importance for the conservation of the natural heritage are projects such as the [Inventory of Unique Forests of Catalonia](#) and the [analysis of carbon pools in forests](#).



## We identify trends through monitoring programmes

Incorporating the temporal dimension into information on biodiversity and the natural heritage makes it possible to detect trends and also assists in decision making.

- ▶ Map of Species of Conservation Interest
- ▶ Monitoring birds in Catalonia
- ▶ Butterfly monitoring
- ▶ Monitoring of marine biodiversity

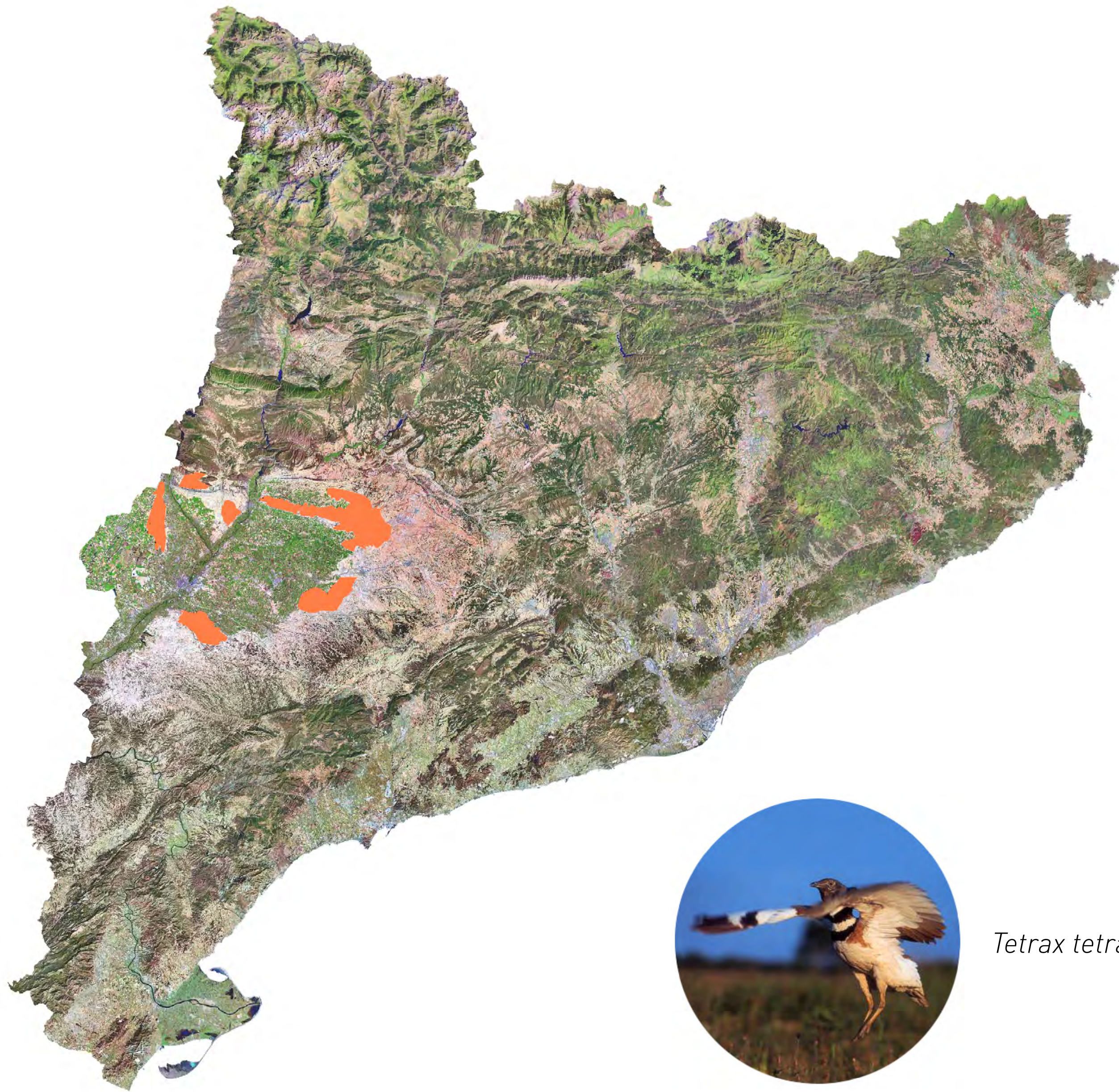


## We identify trends through monitoring programmes

### Map of Species of Conservation Interest

◀ Index

The [geographical information system for wildlife](#) management provides information on the distribution and the critical or most sensitive sectors of the fauna and flora species of conservation interest in Catalonia, based on the data from the monitoring programmes. It is a powerful tool for consultancy, planning and management, with many applications: forestry management planning, the use of natural resources, monitoring and surveillance tasks, the creation of hunting plans, the assessment of the possible environmental impacts of works and infrastructures, etc. This tool was used intensively during the design process for the Natura 2000 Network.



*Tetrax tetrax*

## We identify trends through monitoring programmes

### Monitoring birds in Catalonia

◀ Index

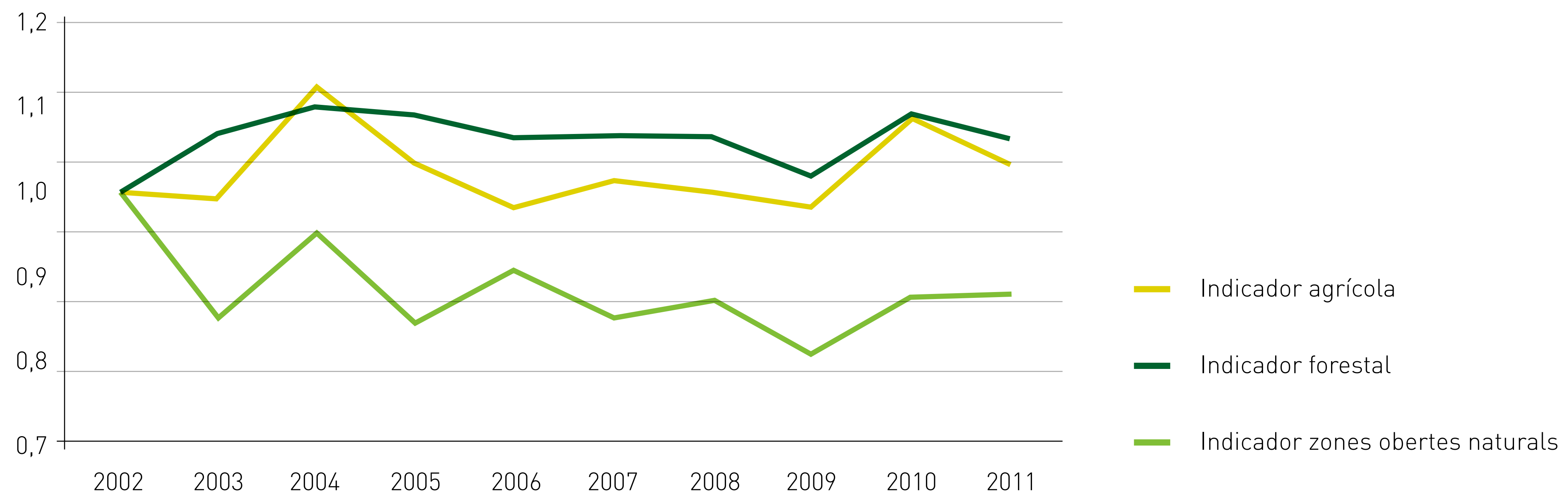
As a result of an agreement between the Government of Catalonia and the [Catalan Ornithological Institute](#), monitoring data are available on the birds of Catalonia, in particular on those in specially protected natural areas since 1992, in accordance with 3 [monitoring projects](#):

SOCC (monitoring common bird species in Catalonia): trends in bird populations in Catalonia.

SYLVIA: productivity and survival of birds breeding in Catalonia.

MIGRACIÓ: migratory patterns of passerine species that cross Catalonia and the use they make of the habitats in their stopover sites.

Thanks to these data we know, for example, that in steppe zones and open areas the trend is more regressive. Species such as the greater short-toed lark, *Calandrella brachydactyla*, associated with agricultural environments, is becoming increasingly rare.





# We identify trends through monitoring programmes

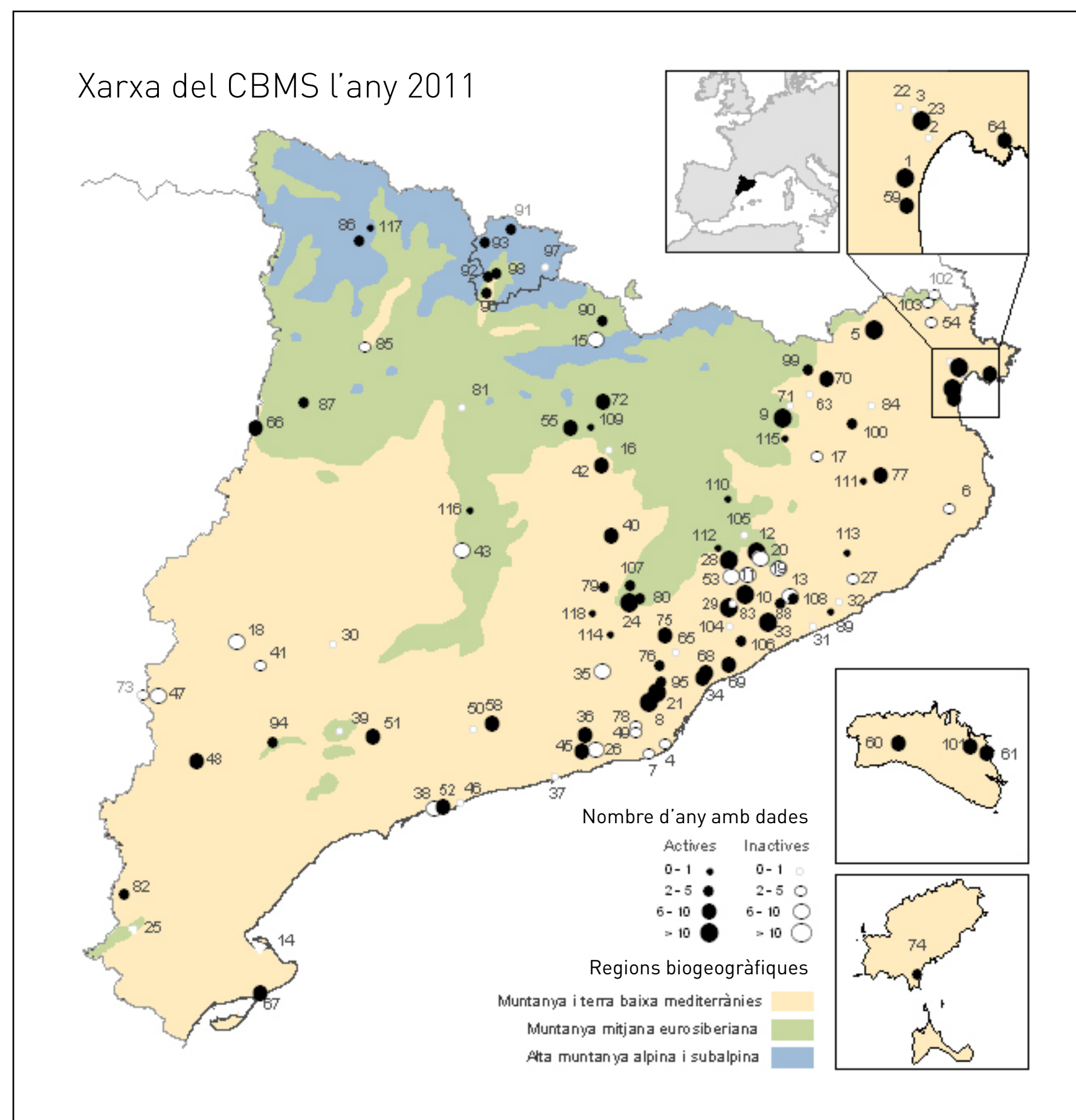
## Butterfly monitoring

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The [Catalan Butterfly Monitoring Scheme](#) was set up in 1994, inspired by the British Butterfly Monitoring Scheme (BMS). In recent years, butterfly populations have been declining all

over Europe, and their function as a bioindicator informs us of the effects of global climate change on natural systems. There are nearly 70 monitoring stations across Catalonia, and the

[data](#) they provide show how the loss of biodiversity in open areas has become widespread.



*Boloria eunomia*

## We identify trends through monitoring programmes

### Monitoring of marine biodiversity

◀ Index

In marine protected areas, the analysis of bioindicators is used to monitor the status and temporal evolution of marine populations and habitats, bearing in mind environmental factors and human activities carried out in these locations. By doing so, responses related to climate change can be detected and, when necessary, the appropriate management measures adopted. Information on the effect of protection can also be obtained.

Studies are made of fish species vulnerable to fishing activities, red gorgonian communities (*Paramuricea clavata*) and red coral (*Corallium rubrum*), algal communities (macroalgae and maërl), seagrass meadows, and the fan mussel (*Pinna nobilis*).

Marine biodiversity monitoring has mainly been carried out in [Cap de Creus Natural Park](#) and in [del Montgrí, Les Illes Medes i el Baix Ter Natural Park](#).



# Conservation

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## We recover endangered species

In Catalonia, many species are threatened by a great variety of impacts and pressures. The challenge is to lower this threat level. Recovery and conservation plans, as well as specific actions such as reintroduction, are effective measures for boosting the populations of these endangered species.

- ▶ Plan to recover the bearded vulture
- ▶ Reintroduction of the lesser kestrel
- ▶ Conservation plan for an endemic species



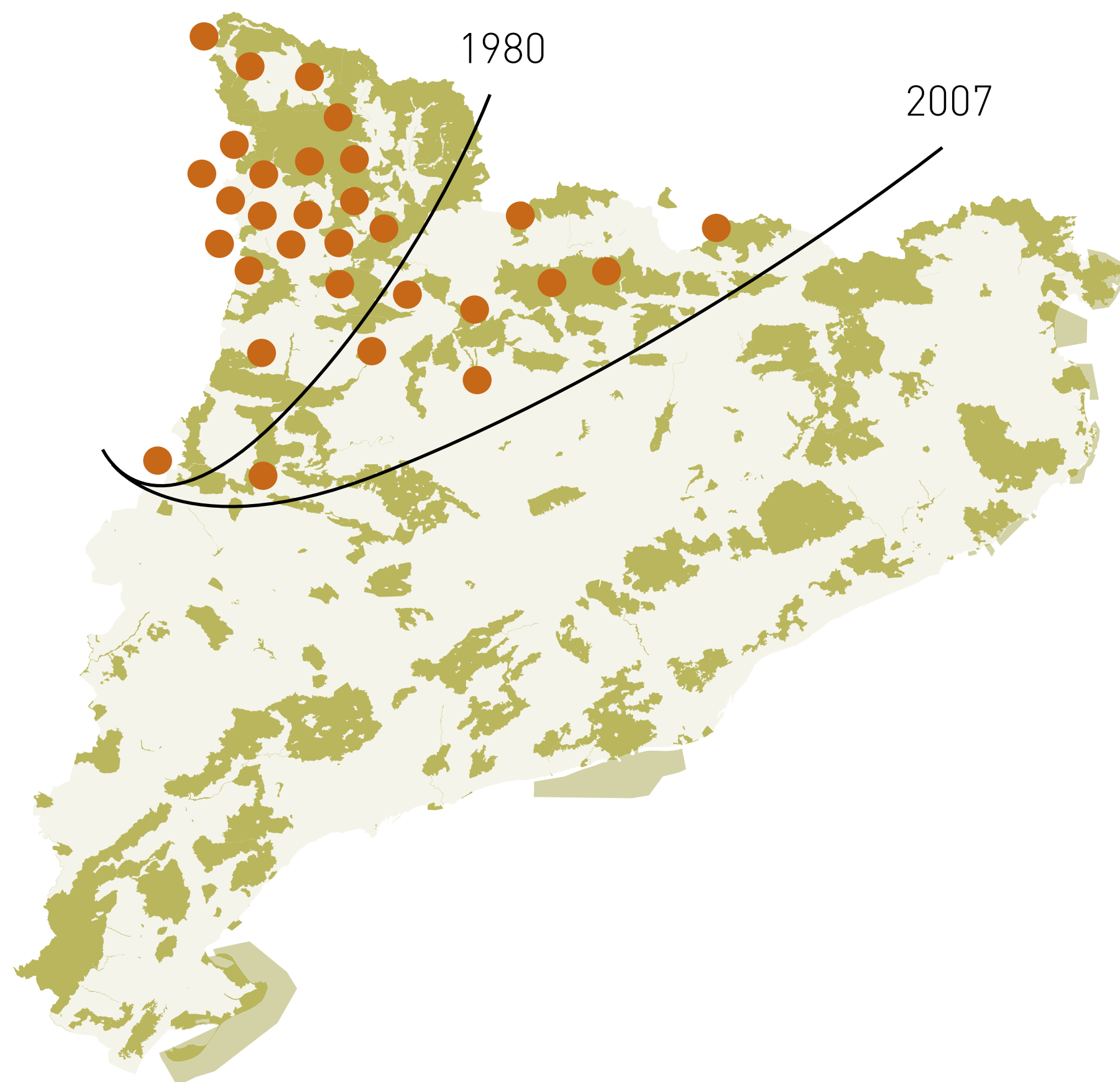
## We recover endangered species Plan to recover the bearded vulture

◀ Index

The bearded vulture (*Gypaetus barbatus*) was the first species for which a recovery plan was approved in Catalonia (in 1994). The aim of the plan is to reinforce the species' breeding capacity, reduce mortality rates, facilitate the

recolonisation of former territories and maintain the natural quality of its habitats. Numbers have risen from 2 territories in the Pre-Pyrenees and 2 breeding pairs identified in 1980, to 40 territories in the Catalan Pyrenees and

around 30 breeding pairs. Despite the fact that bearded vulture populations continue to suffer problems due to poisoning, electrocutions, habitat disturbance, etc., the situation is far better than it was 20 years ago.



*Gypaetus barbatus*

## We recover endangered species Reintroduction of the lesser kestrel

◀ Index

The lesser kestrel (*Falco naumanni*) is the smallest diurnal raptor in Catalonia and appears in The IUCN Red List of Threatened Species. Typically occurring in open areas, the lesser kestrel is a migratory species that returns to Catalonia each year during the breeding period. It mainly used to inhabit the grain-growing areas of the plains of Lleida and L'Empordà, although it was also found in Barcelona and El Bages. It became extinct in 1986. However, during the 1990s, young birds bred in captivity at the Torreferrussa Wildlife Recovery Centre were reintroduced into the wild. Since then, 50-150 individuals have been released each year, and a new population (over 100 pairs) has become re-established in Catalonia, mainly in La Noguera and L'Alt Empordà regions. Nevertheless, the lesser kestrel suffers from pressures linked to predation, which means management of its habitat is required in order to ensure the viability of the species



*Falco naumanni*

## We recover endangered species Conservation plan for an endemic species

◀ Index

The only world population of the [Montseny brook newt](#) (*Calotriton arnoldi*), a recently discovered species, consists of 1,500 individuals, which are concentrated in a few sections of various mountain streams on the Montseny massif. The species is endemic to this massif and is one of the most threatened, classified by IUCN as “Critically Endangered”.

Since 2006, Barcelona Provincial Council and the Government of Catalonia have co-financed the [Montseny Brook Newt Conservation Project in El Montseny Natural Park](#), in order to study this vertebrate (in collaboration with the University of Barcelona) and thus ensure its survival.

In addition to defining the species’ range, several demographic parameters have been analysed, and captive breeding has begun with over 800 individuals being obtained from the Torreferrussa Wildlife Recovery Centre (Ministry of Agriculture, Livestock, Fisheries, Food and Natural Environment of the Government of Catalonia (DAAM)). Since 2010, specimens have been released in rivers where the habitat is ideal for this species, in order to increase its range and reduce the risk of extinction.

The results of monitoring programmes carried out after the release of Montseny brook newts have been positive.



## We protect 30% of the territory

Protected natural areas make up 30% of Catalonia. They form an ecological network, which is managed at varying degrees of intensity, depending on the vulnerability or biological richness of each individual area.

▶ System of protected natural areas in Catalonia





## We protect 30% of the territory

### System of protected natural areas in Catalonia

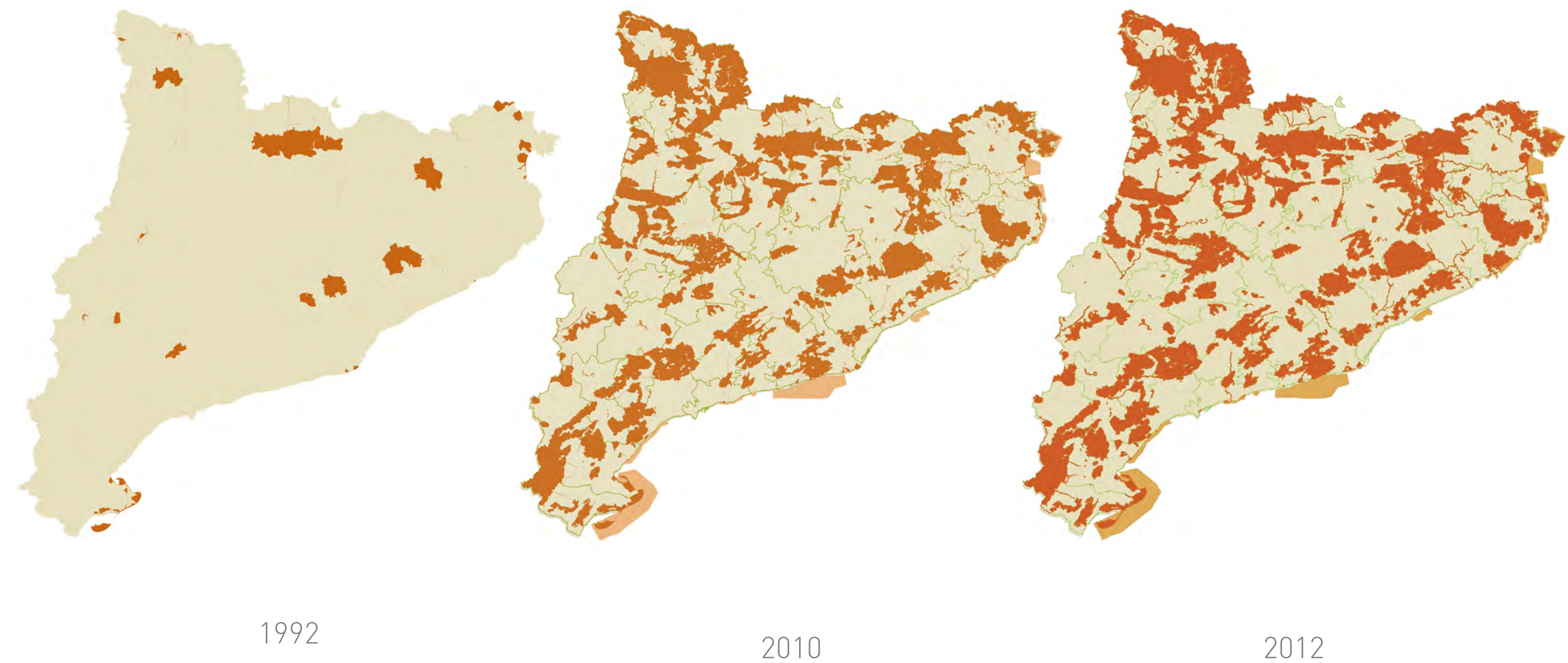
◀ Index

In 1992, the Plan for Areas of Natural Interest (PEIN), based on a methodology incorporating multiple criteria, mainly ecological, provided basic protection for 20% of Catalonia. With the incorporation of the areas into the Natura 2000 Network in 2006, the *system of protected natural areas in Catalonia* now covers 30% of the autonomous region and includes marine protected areas. There are 5 legally established types of protected area: national park, Natural site of national interest, undeveloped nature reserve, partial nature reserve and natural park. These specially protected natural areas enjoy higher levels of management, more financial and human resources, and have governing bodies and collaborators including public and private stakeholders in Catalonia.

The Natura 2000 Network is a European environmental network made up of Special Areas of Conservation (SAC) that support vulnerable habitats and species

other than birds, and Special Protection Areas (SPA) for birds, which support significant numbers of wild birds and their habitats. The network is designed to conserve habitats of European importance, habitats of species of

European interest in their natural range, and species listed in Annex I of Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds. All the areas in the Natura 2000 Network form part of the PEIN.



## We restore degraded natural environments

In addition to preventative and planning measures, the conservation of the natural heritage also requires action to recover and restore environments that have been destroyed or seriously degraded.

- ▶ Restoration of a wetland: Ivars and Vila-sana Lake
- ▶ Environmental restoration of Cap de Creus Natural Park: the dismantling of Club Med
- ▶ Restoration of connectivity



## We restore degraded natural environments

### Restoration of a wetland: Ivars and Vila-sana Lake



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Over 50 years ago, the old Ivars and Vila-sana Lake, with a surface area of 126 ha, was drained in order to use the land for intensive fruit and cereal farming. In 1996, an ecological recovery project was carried out in this area, which has been protected since 1995. In 2002, the [Ivars and Vila-sana Lake Consortium](#) was created. It took charge of acquiring the land and starting restoration work. In 2005, the lake was filled with water again. The restoration has allowed an emblematic landscape and ecosystem to be recovered, a place that can be used for leisure activities, as well as welcoming visitors who wish to enjoy nature.



2008



2004

We restore degraded natural environments

Environmental restoration of Cap de Creus Natural Park:  
the dismantling of Club Med



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Club Méditerranée was a holiday resort built in the 1960s in an environment of great natural and landscape value within [Cap de Creus Natural Park](#), which was created in 1998. In 2005, the Spanish Ministry of the Environment bought the built-up land and included it in the maritime-terrestrial public domain, in order to add it, once the buildings had been removed, to an adjacent undeveloped nature reserve. In 2006, a building removal and environmental restoration project was created for the area (4.5 ha), to be carried out by the Government of Spain and the Government of Catalonia. The concrete structures that provided access to coves and beaches and all the surrounding buildings have been torn down. Invasive, exotic plants have also been removed, habitats restored and public access to the area reorganised. The total cost of the project was 7 million euros.



## We restore degraded natural environments Restoration of connectivity

◀ Index

Both in the construction of the Eix Transversal (C-25), a key road infrastructure in the Catalan transport network, and its subsequent conversion into a dual carriageway, efforts have been made to guarantee the permeability of the highway with regard to natural

systems, especially for fauna. The use of this practice is increasing in Catalonia. The aim is to increase the ecological connectivity of the ecosystems, a key factor in biodiversity conservation. Over the last few decades, it has become clear that it is necessary to

interconnect protected natural areas, creating a network of free areas, a green infrastructure. This is the only way to guarantee the integral development of all the ecosystem functions and, therefore, to guarantee the survival and provision of environmental services.



## We manage protected areas affected by human activity

Catalonia has been a region inhabited and transformed by humans for thousands of years. In protected natural areas, conservation goals must be reconciled with the regulation of public land use and the sustainable development of the country.

- ▶ Promoting sustainable development
- ▶ Regulating public use
- ▶ Biodiversity Conservation and Monitoring Programme



# We manage protected areas affected by human activity Promoting sustainable development



Index

One of the lines of work of the management of protected natural areas is the socioeconomic development of local populations. The [European Charter for Sustainable Tourism](#) takes into account the needs of the environment, local populations, local businesses and visitors in order to improve the management of tourism in protected areas in Europe. The [Volcanic Region of La Garrotxa Natural Park](#) was one of the first to sign this Charter, which has now also been signed by [El Delta de l'Ebre Natural Park](#), [El Montseny Natural Park](#) and [Sant Llorenç del Munt i l'Obac Natural Park](#).



## We manage protected areas affected by human activity Regulating public use

◀ Index

Making public use compatible with biodiversity conservation and promoting environmental education constitute a management challenge. This depends on the vulnerability of each area, the number of visitors and the carrying capacity. In order to reach all sectors of the population, efforts are made to adapt the facilities for public use and guarantee access to the disabled. In [El Delta de l'Ebre Natural Park](#), for example, there are viewpoints accessible to people with reduced mobility.





## We manage protected areas affected by human activity Biodiversity Conservation and Monitoring Programme



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The Government of Catalonia has been developing this programme, in collaboration with the [Forest Sciences Centre of Catalonia](#), and with the participation of various experts, since 2009. The Programme, focused on specially protected natural areas managed by the Ministry of Agriculture, Livestock, Fisheries, Food and Natural Environment, has served primarily to identify the habitats and species for which the areas are of importance in Catalonia, and also to draw up an action plan to increase knowledge, carry out monitoring and provide regulatory preventative protection. Thus, it is possible to know which of these habitats and species have existing or potential conservation problems; which should be specific conservation objectives; and what monitoring, regulatory preventative protection and direct management actions needs to be carried out.



## We promote land stewardship

**Land stewardship** is becoming consolidated in Catalonia as an innovative strategy for the conservation of the land and biodiversity in both public and private areas. Through voluntary agreements, stewardship bodies advise owners and managers on how to contribute to the conservation of the values and resources of the land in their care.

- ▶ Institutionalising land stewardship
- ▶ Subsidies for stewardship bodies

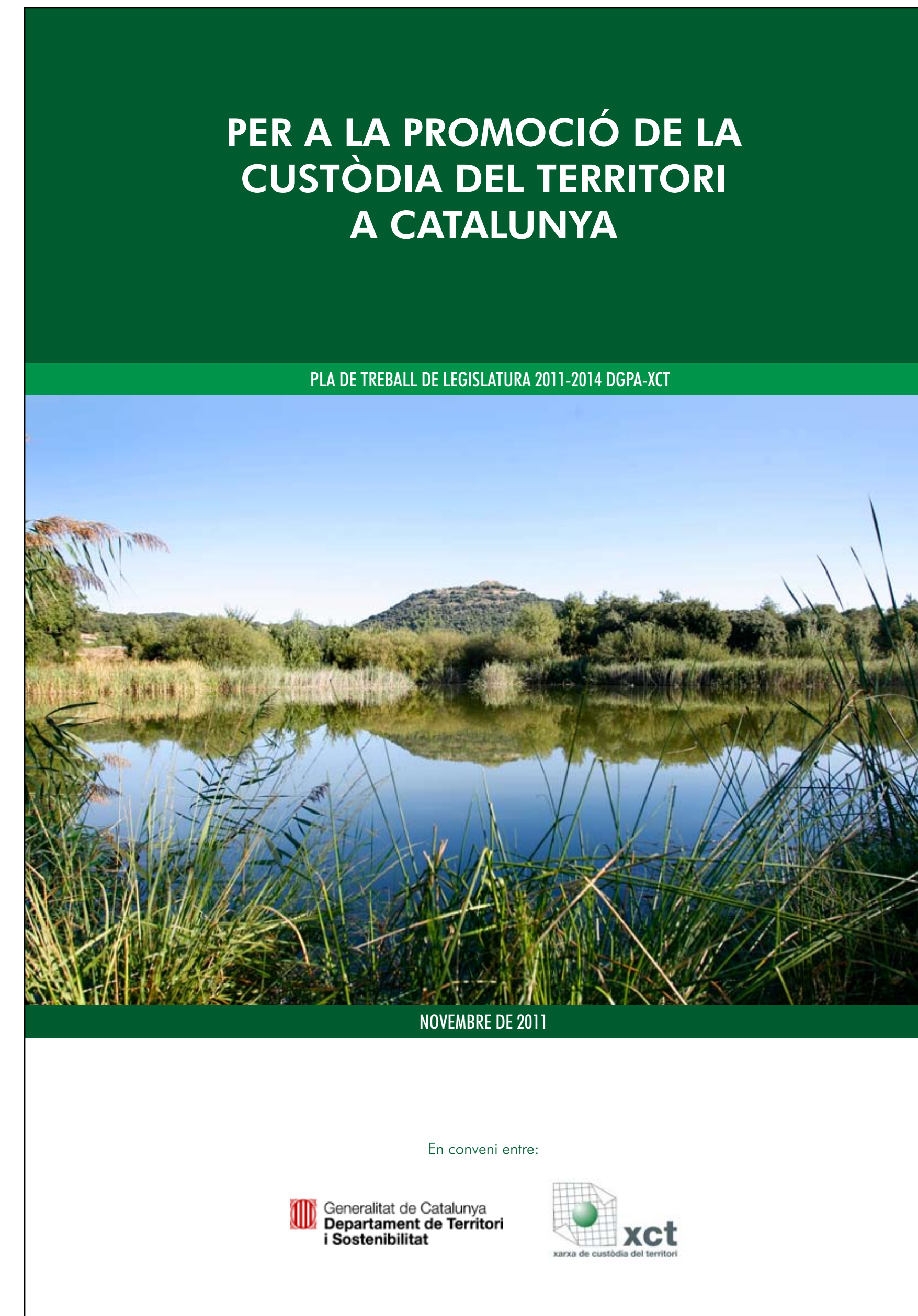


## We promote land stewardship Institutionalising land stewardship

◀ Index

The [Legislative Action Plan 2011-2014](#) is a collaboration agreement promoted by the Ministry of Territory and Sustainability of the Government of Catalonia and drawn up with the support of the [Land Stewardship Network](#). It lists the actions that both organisations undertake to develop together in order to promote land stewardship in Catalonia between now and 2014, as well as details of the economic investment in place to enable them to carry them out. This includes funding from the Government of Catalonia and support from the Land Stewardship Network.

The creation of a programme to develop tax and financial measures and the establishment of financial aid for stewardship bodies, and the participation in European projects are just two examples of the join actions foreseen in the Plan, which counts on the involvement of all the stakeholders linked to the conservation of the natural, cultural and landscape heritage.



## We promote land stewardship Subsidies for stewardship bodies



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In 2009, the Government of Catalonia announced the first programme of financial aid for land stewardship, initially for a 3-year period. [11 stewardship programmes](#) were subsidised, allowing 70 new agreements to be signed by the end of a 3-year period, a 10% increase compared with 2009. A new programme of 3-year subsidies has now begun for the period 2012-2014, to help projects aimed at the conservation of the natural heritage, ideally to be carried out in protected natural areas, wetlands listed in [the Inventory of Catalan Wetlands](#) or areas listed in the [Inventory of Areas of Geological Interest in Catalonia](#).



# Sustainable use

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## We guarantee a sustainable land-use model

Integrated land-use planning incorporates natural heritage conservation objectives and guarantees to organise them properly alongside urban systems and infrastructures.

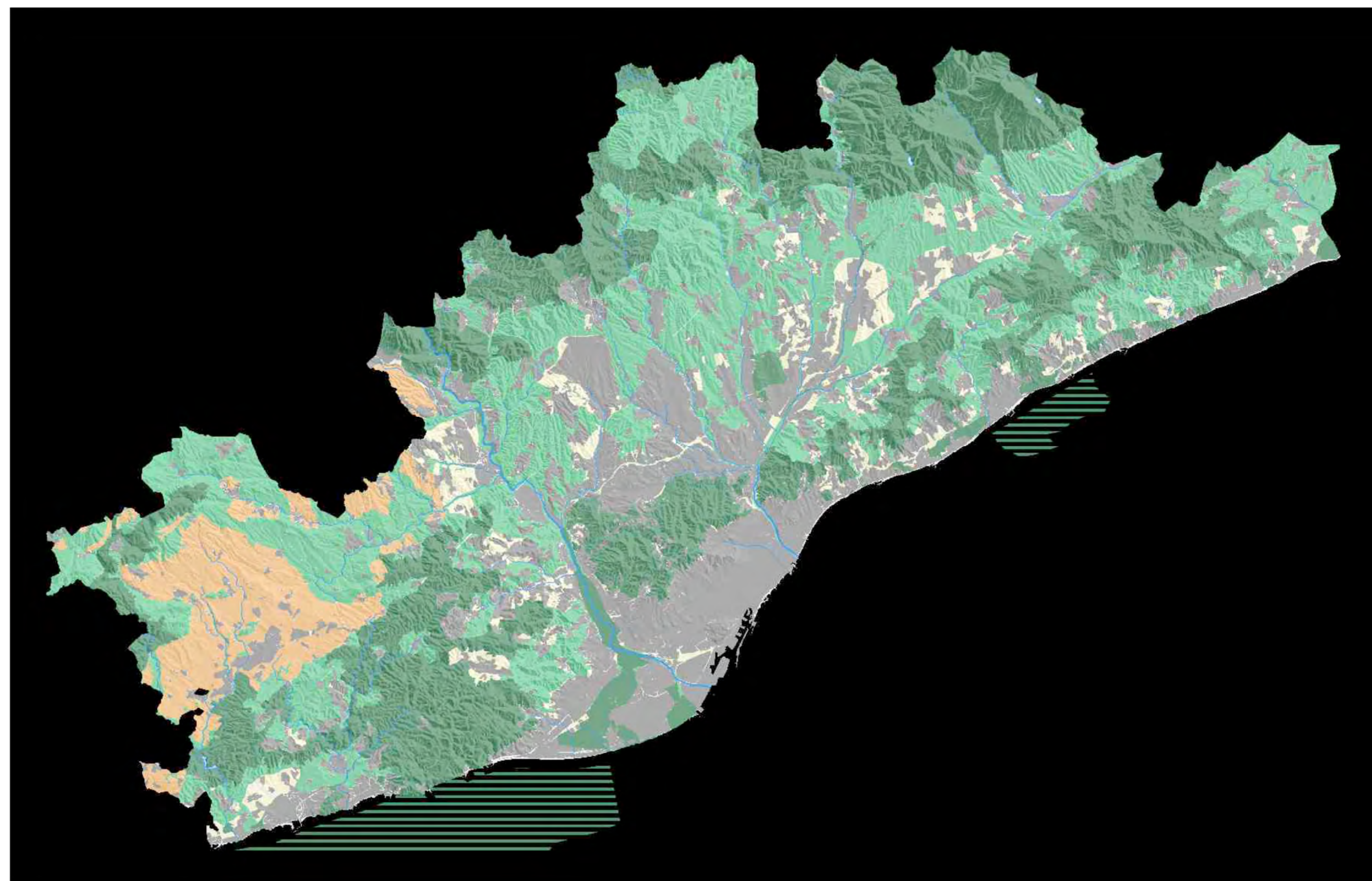
- ▶ Barcelona's metropolitan land-use plan
- ▶ Coastal System Land-use Master Plan



### We guarantee a sustainable land-use model Barcelona's metropolitan land-use plan

◀ Index

Around 5 million people live in the metropolitan area of Barcelona (3,236 km<sup>2</sup>), 2/3 of the total population of Catalonia on only 10% of its surface area. [Barcelona's Metropolitan Land-use Plan](#), approved by the Government of Catalonia in 2010, strives to make socioeconomic development compatible with natural values. It includes four environmental goals: the conservation of the natural and cultural heritage, rationalisation of the land-use model, a guarantee of sustainable accessibility and an improvement in the efficiency of energy flows. The Plan protects the most valuable areas, in terms of the natural heritage, the agricultural importance and the ecological connectivity, and concentrates the land-use transformations in the areas where the impact is lower. The special protection area accounts for 70% of the metropolitan area.



Barcelona's Metropolitan Land-use Plan

# We guarantee a sustainable land-use model Coastal System Land-use Master Plan

◀ Index

In 2005, the Government of Catalonia approved the [Coastal System Land-use Master Plan](#), which protects natural coastal areas from urban development (23,879 ha, of which only 7,053 were already protected). It also declassified some sectors of particular interest that had previously permitted urban development (an additional 540 ha). The Master Plan protects a particularly fragile environment and ensures connectivity between terrestrial and marine ecosystems. It also conserves landscape and cultural values, which are an essential economic resource for tourism activities.





## We change sector-based policies

The environmental assessment of public action in general, and the reorientation of some sector-based policies, become a factor of positive change for biodiversity conservation. Examples of this, within the sphere of the use of natural resources, include agricultural and water management policies.

- ▶ Strategic environmental assessment
- ▶ Agri-environmental measures for meadows and pastures
- ▶ Improving aquatic ecosystems



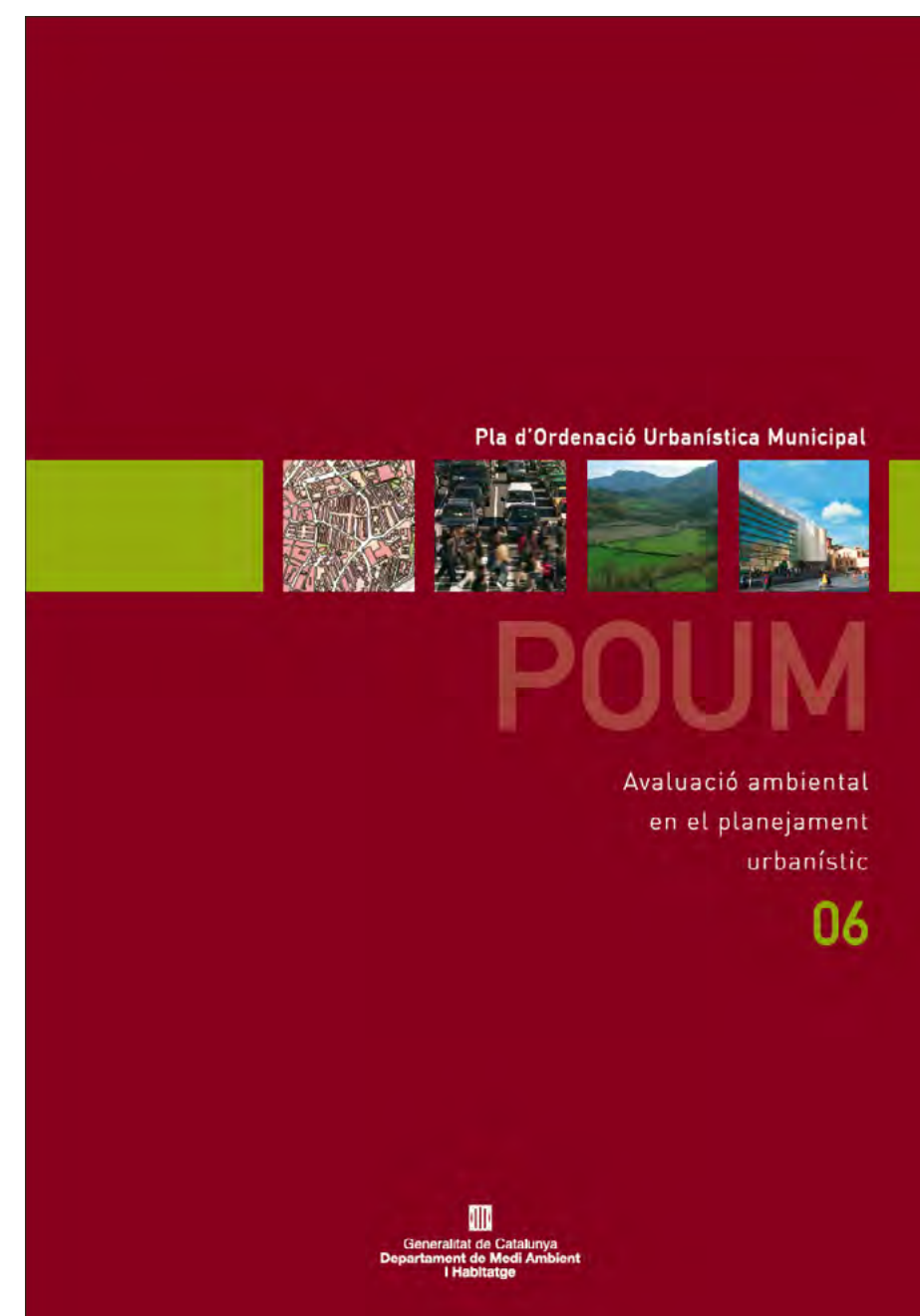
## We change sector-based policies

### Strategic environmental assessment

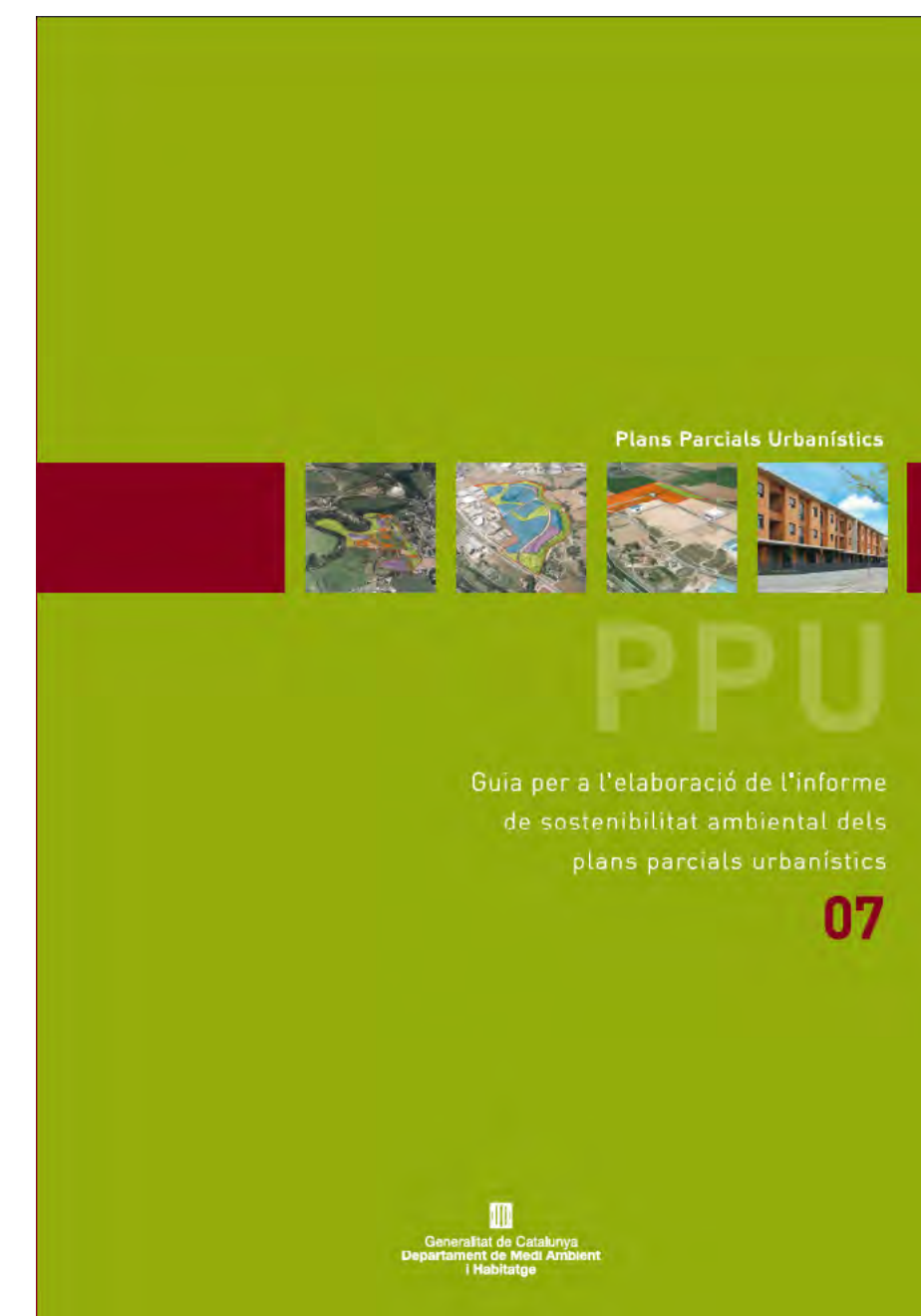


Strategic environmental assessment guarantees the inclusion of environmental requirements both in plans and programmes that can have significant environmental repercussions, and in strategies and other instruments for defining and applying public policies.

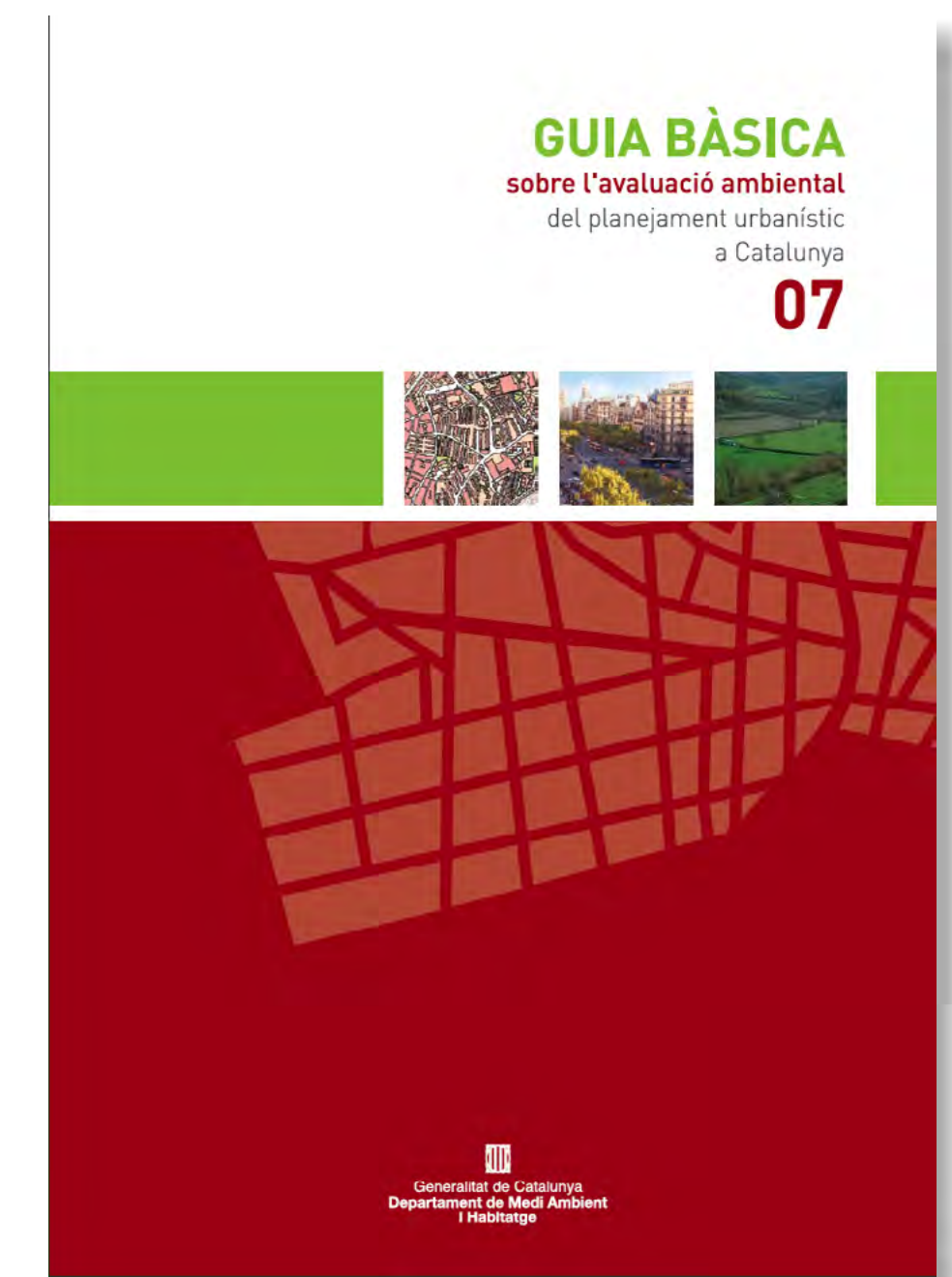
Since 2006, a total of 900 plans and programmes have been assessed. The [introduction of environmental assessment as part of plans and programmes in Catalonia](#) was systematic and generalised. During this time, a [legislative framework](#) has been created, emphasising the simplification and integration of the administrative procedures involved in environmental assessment. And remarkable progress has been made on a methodological level and in information systems as well as in public and institutional participation. Overall, there has been real progress in the extent to which the environmental requirements have been incorporated into new plans and programmes.



Avaluació ambiental en el planejament urbanístic



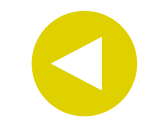
Bases per a l'elaboració de l'informe de sostenibilitat ambiental dels plans parcials urbanístics



Guia bàsica sobre l'avaluació ambiental del planejament urbanístic a Catalunya

## We change sector-based policies

### Agri-environmental measures for meadows and pastures



Index

The orientation of the Common Agricultural Policy has varied a great deal over the last few years. In the current period, 2007-2013, the focus is on promoting environmentally friendly agriculture, aimed in particular at the conservation of European biodiversity. An example of this objective is the set of [agri-environmental measures](#), which provide funding to farmers who voluntarily adopt practices that help conserve the natural heritage. One of the new current measures is the funding of actions aimed at the conservation and recovery of mountain meadows and pastures, especially hay meadows, a semi-natural habitat considered to be of Community interest because of the diversity of plants it contains.



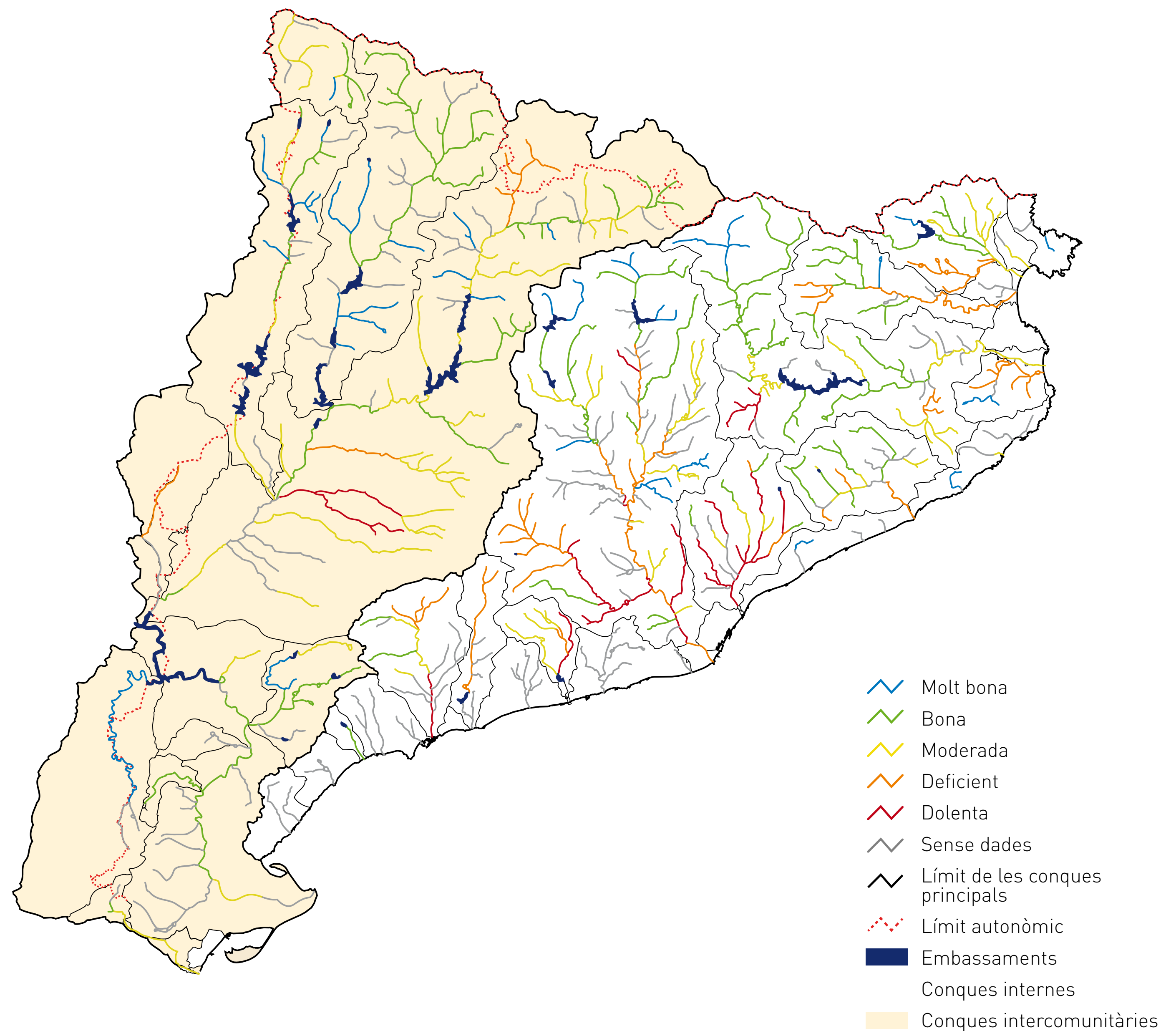
## We change sector-based policies

### Improving aquatic ecosystems



Index

Over the last 20 years, there have been substantial improvements in the continental aquatic ecosystems in Catalonia, particularly in terms of physicochemical quality. The characterisation of ecological status, in accordance with the EU Water Framework Directive (2000/60/EC), is based on biological, hydromorphological and physicochemical parameters, and the improvements are reflected in the fact that, of the 367 river sections analysed, up to 20% have exceeded the good ecological status threshold. The [Catalan Water Agency](#) has drawn up the [Catalan River Basin District Management Plan](#), which aims to ensure that 70% of the river sections attain a good ecological status by 2015.



Biological quality of water

## Along with conservation, we promote new opportunities

Economic activity puts great pressure on the environment. Therefore, it is essential to integrate conservation objectives into employment, tourism, industrial, and energy policies, etc., and generate new opportunities at the same time.

- ▶ Organic farming action plan
- ▶ Tourism and nature conservation



### Along with conservation, we promote new opportunities Organic farming action plan

◀ Index

In Catalonia, organic farming is a productive sector that has become increasingly popular in recent years. Not long ago, a [Programme for the Promotion of Organic Agri-food Production \(2012-2014\)](#) was created for Catalonia, in order to boost the growth and diversification of the sector, to encourage the development of local initiatives and to promote the commercialisation of the products grown. The Programme considers organic agri-food production in protected natural areas to be yet another example of the role that these areas play in the conservation of Catalonia's natural heritage and to represent an added value within the quality framework generated by these areas.



# Along with conservation, we promote new opportunities Tourism and nature conservation



The [European Charter for Sustainable Tourism \(CETS\)](#) is a programme promoted by the [EUROPARC Federation](#), designed to make the conservation of the values of protected areas compatible with the aspirations of local businesses, the expectations of visitors and the needs of the local populations. In 2001, [The Volcanic Region of La Garrotxa Natural Park](#) was one of the first to sign this Charter, with a Programme that proposed 23 actions and generated an effective investment of €9,414,450 over 5 years. In 2006, the Charter was renewed for a longer period, with a programme of 83 actions. The main partner is Turisme Garrotxa, an association that includes both public and private stakeholders from the tourism sector in the region. In 2008, Phase II of the ECST began to be implemented, with the accreditation of tourism businesses. To date, 19 accredited companies in La Garrotxa have established a mutual collaboration relationship with the Park.



## We reinforce global climate change policies

Climate change mitigation measures and external responsibility criteria are adopted at a local level, to address the main global challenges facing the conservation of the natural heritage.

- ▶ Accountability in biodiversity conservation
- ▶ Climate change policies in Catalonia





# We reinforce global climate change policies

## Accountability in biodiversity conservation



Index

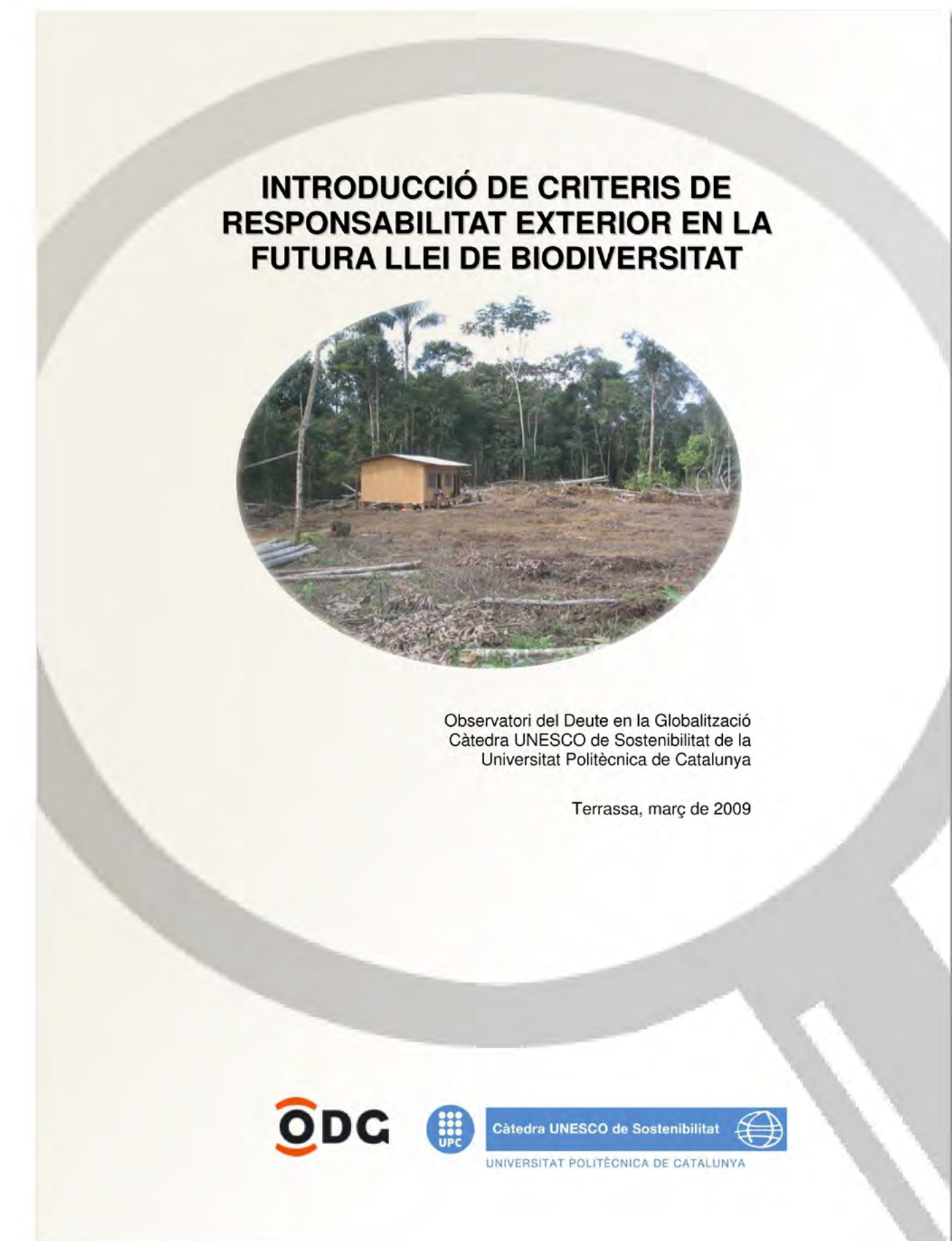
In 2009, in collaboration with the [Observatory on Debt in Globalisation of the UNESCO Chair on Sustainability](#), a study was made of the [impact of the economic activity and consumer behaviour of Catalan society on global biodiversity](#), in order to establish accountability criteria for actions carried out by the Government of Catalonia.

The [study](#) analyses the effect on global biodiversity of aspects such as:

- international cooperation, and what is known as “anti-cooperation”
- imports of oil, gas and uranium; biofuels; minerals; agricultural, fishery and aquaculture products; wood; endangered species

- direct foreign investment, either made up of input by Catalan shareholders or consisting of capital of Catalan origin made by companies whose activity has an impact on biodiversity
- official aid for development, due to the fact that many cooperation projects take place in locations with very high levels of biodiversity
- the official internationalisation policies in the Catalan business sector, to the extent that commercial operations and Catalan foreign investment are a source of potential impact on global biodiversity

A second phase of the study, which will result in the drawing up of an action plan, is currently underway.



## We reinforce global climate change policies

### Climate change policies in Catalonia

◀ Index

The [Framework Plan for Climate Change Mitigation in Catalonia 2008–2012](#) allowed for the coordination, monitoring, and promotion of sector-based policies, plans, actions and projects aimed at reducing emissions.

The [Catalan Climate Change Adaptation Strategy 2013–2020](#) tries to minimise the environmental, social and economic costs that may arise due to foreseeable

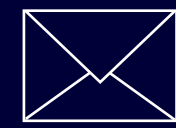
new climate scenarios, and proposes generic and specific measures for adaptation, in accordance with the level of vulnerability of the sectors and systems identified (agriculture, livestock rearing, biodiversity, water management, forestry management, industry and services, mobility, etc.). The strategy includes technical, regulatory, economic and financial, research, education and awareness-

raising measures. The Ebro Delta and the Pyrenees are two of the most vulnerable areas; and water is the system most sensitive to the impact of climate change.

Through the creation of the strategy and the revisions planned, the potential stakeholders have been identified and participation and coordination mechanisms have been drawn up.



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General Directorate for Environmental Policy