

**LIFE PROJECT.**

**A NEW MANAGEMENT MODEL FOR SPAs.**

**La Serena and its foothills. (2001 - 2004)**

**Alternative agricultural management compatible with environmental protection .**

---

**The Life project LIFE00NAT/E/7327 has made possible to test a model of exploitation compatible with the natural values of the SPA "La Serena y Sierras Periféricas". This model combines simple means of farming, livestock and hunting management, has turned out to be viable from the environmental and economic point of view, and has been generally accepted by the local communities. The reorientation of some European Union grants would make possible to implement such a model at a larger scale in this particular site of the Natura 2000 network and would guarantee its conservation at long term.**

**This model could be applicable in other comparable scenarios in the Natura 2000 network.**

La Serena can be considered as the largest grassland area of the Iberian Peninsula and the Western part of Europe. The natural grassland and farming practices have had as a consequence the establishment of a very diverse and valuable steppic bird population of great importance at a national and international level, including Great Bustard, Little Bustard, Pin-tailed Sandgrouse, Black Bellied Sandgrouse, Lesser Kestrel and Northern Goshawk. The surrounding mountains (Sierra de Tiros, Sierra de la Moraleja y Sierra de Siruela) do have in their slopes important populations of Bonelli's Eagle, Golden Eagle, Griffon Vulture, Egyptian Vulture, Black Stork and Monk Vulture. There are some quotes of Spanish Imperial Eagle and Iberian Lynx.

The implementation of the 79/409/CEE Birds Directive produced its designation as Special Protection Area (SPA), under the name *La Serena y Sierras Periféricas*, including the Special Conservation Areas (SCA) *La Serena- Sierra de Tiros, Sierra de la Moraleja y Sierra de Siruela*, nominated by the 92/43/CEE Habitats Directive

Changes in arable and livestock farming techniques and the management of hunting in the SPA in recent years have created a series of threats (excess of livestock, arable intensification / abandonment of the use of chemical biocides and fertilisers, excessive hunting, etc.) which have a negative impact both on the steppe-like pastureland (a priority habitat, according to Directive 92/43/EEC) and on the various priority species of birds. To stop such situation, this LIFE project has implemented and evaluated a new management model compatible with the natural values of the SPA.

The project was carried out on 4 different estates ( see figure 1 ):

- Two pilot estates where alternative farming and hunting management measures were implemented.
- Two control estates which maintained traditional farming practices .

Intense monitoring of several variables was carried out on the estates ( monitoring of bird populations , Agriculture and cattle performance etc ) which enabled us to analyse the model's economic and environmental viability .

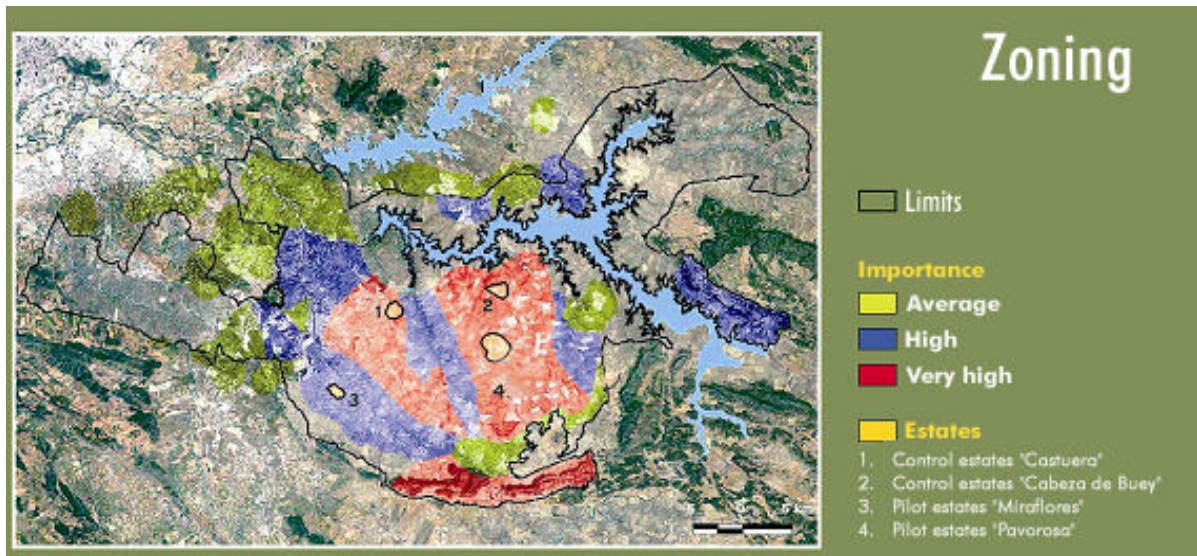


Figure 1. Zoning of La Serena y sierras Periféricas SPA

## A new alternative management model

The management model produced as a result of the LIFE project is based on the following steps:

### Hunting management.

- Three hunting days per month to be determined by the regional government. Permitted methods : Partridge shooting (?) and partridge hunting with dogs ( One group of five hunters per day ).
- Improved prosecution of poachers by the regional government .

### Farming practices.

- A portion of the estate should be cultivated (20% - 35%).
- One third and/or a quarter cereal cultivation.
- Allotment sowing of legumes or peas (25%-30%) of the cultivated area.
- No use of chemical fertilizers, pesticides and armoured seeds.

- A farming calendar respecting the biological cycles of important birds.: Delaying cereal harvest until 20 June ; Ploughing between 1 October and 1 March, and legumes and peas for consumption from the 20<sup>th</sup> of July .

#### **Cattle management.**

- A minimum of 1.5 sheep / hectare and a maximum of 2 sheep / hectare.
- Reduction in the use of pesticides to combat locust explosions .Only authorised pesticides can be used on organic pasture in continuous areas of less than one hectare and of 5% or less of the estate.

### **Model evaluation.**

**Environmentally**, the model was beneficial for both the endangered bird population and the game species. What it was achieved was:

- Regeneration of steppe pasture .
- Diversification of feeding and reproduction habitats .
- Increasing of trophic resources
- Improvement in the habitats quality

However the heavy rainfall recorded during the control period validated a conventional management system within the estates: The richness of pasture put up with over 2 sheep /hectare and bird population stayed reasonably stable.

Because of this , the viability of the model should be analysed over the long term especially during periods of drought where the alternative model might turn out to be more effective .

**Economically** speaking , the final balance is expected to show a loss in average income of 35.13 /hectare/ year in comparison to that of conventional farming mainly due to losses in cattle profitability ( 27.50 /hectare/year ) which is slightly more than current EC funding for sheep (27.50/hectare/year) in La Serena and less than the average of (33.58 /hectare/year) which these estates did not receive because of sheep occupation (1.2 sheep/hectare). Also , the fixing of certain agricultural variables cultivation in estates , the use of organic fertilizers and a correct combination of crops year after year (wheat/oat) and the production of quality products (for example cheese in La Serena) increased the profitability of the test model against conventional management.

### **Model viability.**

Model viability would be guaranteed by the reorientation of European Community funding ,

- CAP ( Common agricultural policy) direct funding . Extensification bonuses instead of the current bonus per head system could compensate the loss of cattle farming profitability .The lump sum disassociated from production and its conditions would be a good base for this cattle farming extensification in the SPA.
- Funding for sustainable development ( Royal Decree 11/1999). The reduction of hunting is currently only subsidised in the SPA ‘ Llanos de

Caceres and Sierra de Fuentes' though this could also be applied to 'La Serena and its foothills'. The royal decree should take into account once again funding for the sowing of crops which encourage the growth of fauna population and might even eliminate certain measures of little interest for conservation.

- Funding for Environmental-farming. Losses derived from alternative agricultural management could be compensated and stimulated by specific environmental-farming funding for the SPA and the important steppe areas in Extremadura. At the moment this region does not receive such funding even though there is legal base for its design and application .

Both the last two types of funding and new ones in the future need to clearly define activities to be subsidised and the requirements . It is of vital importance to follow up approved funding as this enables long -term evaluation of the effectiveness of the different management measures being implemented .

### **Other factors.**

To assure maximum effectiveness in the application of this model (from both the conservationist and socio-economic point of view) other aspects would need to be addressed:

- Greater protection of the 'lek' areas of the great Bustard.
- Restriction in the use of insecticides and pesticides to combat locust explosions. This measure is turning out to be conflictive in regulating funding because of their high cost and due to the fact that treatment is compulsory. The locust permanent committee would have to come to an agreement on this matter and also become more aware of the real damage being done to farms and the like.
- Farmers and cattle farmers require more direct information on funding available according to the habitats and species existent on their estates.

The zoning of the SPA done by the Life project ( which concerns the limitation of current habitats , their natural interest, priority species – see figure 1-) is turning out to be a useful tool for: 1) to decide on the criteria on which to approve the applications for funding and 2). to establish priorities to authorise applications not only because of the environmental importance of the area but also the very nature of the funding applied for.