



Región de Murcia
Consejería de Industria y Medio Ambiente
Dirección General del Medio Natural



GUIÓN PARA EL DVD SOBRE EL PROYECTO “CONSERVACIÓN DE *Hieraetus fasciatus* EN LA ZEP A DE ALMENARA, LAS MORERAS Y CABO COPE. LIFE02NAT/E/8602”

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Partners:



Colaboran:



Bonelli's eagle

Bonelli's Eagle is a typical mediterranean raptor, is sedentary and breeds in the Region of Murcia. Couples are stable and defend its territory against other eagles and competitors. It breeds from January to June and the laying usually consist of two eggs. As predators, they are on the top of alimentary string in the ecosystem, they are scarce and need large extensions of territory for living. Their role in the ecosystem is vital since they control the populations and health of prey species by consuming the ill and inexperienced individuals. Besides, they prevent the proliferation of opportunist predators such as foxes, rats and magpies. Optimum habitat for Bonelli's eagle is characterized by predominant scrub mixed with traditional cultures, that is the favourable habitat to their main preys: rabbits and red-legged partridge. Nevertheless, they also prey on pigeons and ocellated lizard and others. They nest in marine and fluvial cliffs and in high sloped mountains of moderate or low altitude. European population ascend to 1000 couples, 700 of them living in Spain where the population has decreased

drastically in the last decades. It occurs the same at the Region of Murcia where it is catalogued as “**endangered**”. At the moment, there are 22 couples left of the 40 estimated couples in the seventies.

LIFE project and the SPA

The Dirección General del Medio Natural of Region of Murcia takes charge of the monitoring of its population since 2002, when the Region was granted by the European LIFE program, funds exclusively directed for environment and nature. The LIFE project pursued the conservation of the best site for Bonelli’s eagle in Murcia: the Sierra de Almenara, the Moreras y Cabo Cope. This Special Protection Area(shortened SPA), was designated in 2001 and shelters 7 couples. The project, provided of 1.113.232 euros lasted four years. It is funded in a 75% by LIFE funds, in a 22% by Regional Administration and the rest by the partners, Iberdrola Distribución S.A. and Red Eléctrica de España. The project pursue to reduce some of the threats present at the SPA: habitat transformation, rabbit and red-legged partridge population decrease, dangerous power lines.

The SPA of Sierra de Almenara, Moreras y Cabo Cope is situated on the south-west of the Región of Murcia comprising 22.350 hectares, most of them private, in the municipalities of Lorca, Águilas and Mazarrón. The economic activities in the SPA are game and extensive cultures and livestock farming, although lately countryside tourism has increased, attracted by the natural landscape. Around the SPA, it is developed an important intensive agriculture, above all fruit and vegetable in greenhouses or conventional.

This protected site has a high ecologic value, so much with reference to habitats as to species. It counts on 12 natural habitat types of Community interest, three of them are priority ones. The flora is characterized for the presence of endemic species joined to others which grow in north Africa. The characteristic formation is thermo-Mediterranean scrubland consisting of Saw Palmetto, Wolfbane, Lentisc, Prickly Juniper and other hard-leaved species. This vegetal community is altered and just scattered patches remain among Esparto grass land. There are small Holm-oak patches at the north slopes of Almenara, while the Aleppo Pine of Almenara and Moreras covers a wide surface.

The SPA obeys the numeric criterions for two bird species, in addition to the Bonelli’s eagle: Eagle Owl, with 30 couples and Trumpeter Finch with 45 couples. The presence of the latter,

which is typical of arid north-African habitats, means a rarity in European territory, since it only appears in some coastal mountains of the iberic south-east.

Other cliff-nesting raptors which use the abundant available cliffs are Peregrine and Golden Eagle. Furthermore, the Mediterranean Spur-thighed Tortoise population is representative too.

Due to the high ecologic value, other protection figures coincide in this site such as Regional Park Cabo Cope-Puntas de Calnegre, Protected Landscape Sierra de las Moreras. The proposed Special Areas of Conservation Sierra de las Moreras, Sierra de Almenara and Cabo Cope and various Wildlife Protection Areas.

Conservation and Management Plan

One objective of the LIFE project is the definitive approval of the SPA Conservation and Management Plan in June 2006. The document will establish the zones classification and will regulate the territory uses in order to guarantee the Favourable Conservation State of the natural values. The new regulations are minimum and yet including six action programmes with a six year investment of 3.788.127 € More than a half of these correspond to the Habitat Shared Management Programme from which the SPA owners who desire to establish an agreement with Regional Administration, could be benefited.

Agreements for the habitat shared management

As a demonstration, in LIFE project, 24 of these agreements for the habitat shared management have been established, reaching a total surface of 2.398 hectares that represent more than 10% of the SPA.

The Global Nature Foundation helped the contact with land owners. Besides, the Foundation performed the works for habitat and prey species improvement: red-legged partridge and rabbit.

Plots Sowing for game feeding

One of the actions consisted on annual sowing of 200 mixed plots with lucerne, common vetch, barley and oats, measuring approximately 1.000 squared meters each. Slope and

proximity to liberation sites were taken into account for locating plots. Through the year, cultivation and fertilization works were executed except for harvesting because the purpose is feeding rabbits and red-legged partridges.

Enhance of the rabbit populations

Besides, more than 100 artificial refuges for rabbits have been built in order to enhance rabbit populations. This kind of structures has been carried out in an landscape-integrated way by using, when possible, native natural materials. The distribution of the refuges were realized attending to the land characteristics, owners acceptance, location of game liberations and the lack of native rabbits. Sowed plots and drinking troughs for the summer months have been located in the vicinity of the refuges. The rabbits for reintroducing were captured where they cause damages to agriculture. Altogether, 1.500 previously disparasited and vaccinated against mixomatosis and Viral Hemorrhagic disease rabbits have been liberated.

Enhancement of red-legged partridge population

Red-legged partridge population improvement is also one of the project's objectives. 2.000 red-legged partridges were introduced each year coming from the game farm Fuente Atocha owned by the Ministry of Industry and Environment of the Regional Government. They were released in 75 previously built acclimatization cages at plots in agreement. The cage's dimensions guarantee the comfort of 20 to 30 red-legged partridges which stayed 15 days in, before their liberation. One trough and a water container were located in, apart from a bundle of firewood as a shelter in case partridges are scared of any exterior predator.

Correction of distribution power lines

Main cause of artificial mortality of Bonelli's Eagle in Spain is electrocution while it is the second cause in Region of Murcia after direct persecution by means of shooting, poisoning, etc.

Collision occurs in both distribution and transmission power lines. Electrocution occurs normally only in distribution power lines when a bird perches on a pylon and touches a wire or touches two wires at the same time. Electrocution probability is greater for large birds and in pylons with conductive elements above crossarms. Both more dangerous power lines and "prefered pylons" have been identified in the Special Protection Area and in the vicinity by

means of a specific study. It was also found an electrocuted Eagle Owl and was detected that 2'3% of pylons were used by Bonelli's Eagle, Eagle Owl and Kestrel as perches. Electrocution of birds is not only damaging for them but also they cause failures in lines, blackouts and pauses in service for clients. Iberdrola Distribution S. A, who is the owner of 75% of power lines, has performed the correction of the three chosen lines: Pastrana, Purias and Ugéjar. Corrections consist of replacing dangerous crossarms with vaults, less dangerous although not harmless, reshaping crossarms and isolating conducting elements.

Correction of transmission power lines

Electrocution does not occur in great transmission power lines because of the large distances between wires as between wires and crossarm. Nevertheless, it is frequent the collision of birds with static wires which are thinner and less visible than conductors. Juvenil mortality could become important when young eagles fly around nest site before emancipating. It is the case of the transmission power line that crosses the SPA over 34 Kilometers and affect four eagles' territories. In order to minimize this risk, it have been done a static wire-marking with spirals which enhance visibility of these wires. This work was performed by Red Eléctrica de España, owner of the line and partner in the LIFE project. Initial six Kilometers objective of static wire-marking was reached in 2003, so in 2004 it was extended for reaching ten kilometers marked.

Nests surveillance and monitoring

All seven pairs of Bonelli's Eagle in the SPA are surveilled and monitored in order to state their good health. Breeding surveillance is performed from a distance by means of binoculars and fieldscope. Average breeding parameters obtained in the project span are ones of the highest known for the species: 94% of the pairs began breeding, 93% of them raised some fledging and the productivity is 1'27 fledgings per pair and year. These data show that food for pairs is suitable. Apart from breeding surveillance, the trapping, marking and radio tracking of three males and one female of four different pairs have been carried out. All four home ranges obtained exceed the SPA limits: 33, 58 y 68 squared kilometers for three home ranges obtained after two year radio tracking, and 20 squared kilometers in the case of the female who was radio tracked just five months when it was admitted to the Wildlife Recovery Center. It had been shot and showed electrocution symptoms. Other events detected

thanks to monitoring are illegal ploughing of scrub, the alleged robbery of a Bonelli's Eagle nestling and a case of poisoning.

Public sensitization and results spreading

The LIFE project develops several sensitization and spreading actions.

It is highlighted the opening of a local LIFE Office at Campo López, a Lorca's hamlet. The office is located on the first floor of the ancient school, which was given by the town council and fitted up by the LIFE project. The local reflects the Regional Government efforts in approaching land owners. They are carried out informing labours for land owners, neighbours, and advising in game and hunting, farming and environmental issues, subsidies, etc. Also, requirements for agreements between land owners and the regional government are provided here.

It was given a training course on conservation in the SPA and on LIFE Project in two editions (2003 and 2004 years) for environmental agents and SEPRONA.

LIFE project can be followed-up at the ministry of industry and environment of the regional government web site which is updated periodically. Land owners who signed the agreement in the LIFE Project receive also a specific bulletin where they are shown actions carried out.

Other spreading and sensitization actions are the edition and delivery of booklets and teaching material: a poster on Bonelli's Eagle, a teacher and alumn book with cards and stickers included for students of the third cycle of primary education. They have been given talks to teachers and alums like the compulsory secondary education school "La Almenara" in Purias (Lorca), including a field lesson, and the primary school "Mediterraneo".

A Workcamp was performed in summers 2004 and 2005 participating 36 volunteers from all around Spain.

Road signs were located where actions in field: habitat improvement, lands in agreement, corrected power lines and LIFE Office. SPA limits roadsigns where located too.

The Mediterranean Savings Bank made an important contribution through its Social Work by filming all actions of the project.

The book comprising the results of the “Exchange Workshop on management of Bonelli’s Eagle” was edited after its celebration at Sierra Espuña Regiona Park and Almenara on Janurary 2005. Regions of Murcia, Andalucía, Extremadura, La Rioja, Vasc Country and Valencia participated, as well as the Universities of Murcia and Alicante.

LIFE crue also participated in different conferences at Murcia, Madrid, Zaragoza and Burgos, as well as published several spreading articles.

Agreements with land owners have been a territory guarding pioneer experience in the Region of Murcia and proved as the best way to enhance conservation on private land. Disinformation about what to be an owner in Natura 2000 Net involves and its advantages has been also reduced. Finally, food for Bonelli’s Eagle has been guaranteed and collision and electrocution risks have been diminished. All seven pairs remain at the SPA so young fledged can recolonize abandoned territories in Region of Murcia.