Conservation of the Houbara Bustard (Chlamydotis undulata fuertaventurae) in the Canary Islands (Spain)
Between 2003 and 2007 SEO/Birdlife has undertaken a project that has focused on the Houbara Bustard, the largest of the birds that live in these islands. The main objective has been to guarantee that the necessary measures were taken to ensure the conservation of this endemic subspecies of the Canarian archipelago that lives in the sandy plains of La Graciosa, Lanzarote and Fuerteventura islands.

The project had a total budget of 1,558,321 euros, granted mainly by the European Union via its LIFE Nature funds with the collaboration of the Canary Islands government, the councils of Lanzarote and Fuerteventura and the RSPB (Royal Society for the Protection of Birds) and the support of Swarovski.

Below is a summary of the main actions undertaken during the four years’ duration of the project with a view to disseminating information on its results.
The purchase of this place was one of the basic pillars of this LIFE project and it took up over 50% of the total budget. The reserve, known as "Cercado del Jarde", lies in one of the best areas for the Houbara in Fuerteventura, close to the villages of Triquivijate and Los Alares, in the council of Antigua. It extends over 200 hectares of stony and earthy ground in a good state of conservation and it is completely enclosed. With this purchase SEO/Birdlife has tried not only to preserve indefinitely a piece of optimal habitat for birds of steppic environments -and for the Houbara Bustard in particular- but also to foster the recognition of the significance of this type of semi-desertic landscapes among the local population.

The sanctuary was duly signposted: placards were placed at different points of the enclosing wall. Some of the preventive measures taken after the purchase of the land -which will better regulated in the future with the support of closer studies- have to do with the reduction of cattle access to the farm as well as with the traditional way to hunt rabbits (using dogs and ferrets but no guns).

The farm Management Plan is a technical document drafted also within the framework of this project and it aims at establishing the guidelines for action in this respect. Among other measures it envisaged the undertaking of research aimed at regulating traditional practices like cattle-grazing or hunting so that they become compatible with and respectful of the conservation of the Houbara and other birds. The plan also took into consideration the creation of bird observatories and the placing of information placards for the visitors, among other measures.
According to current laws, and as a result of research carried out within the project, a Plan for the Recovery of the Houbara Bustard has been drafted. It has later been handed over to the Canary Islands government for its study and approval. A team of experts has given its advice and has offered ideas and suggestions. As this is a species protected by law -with the highest possible degree of protection at a national level, as it is in danger of extinction- the future conservation and protection tasks regarding this bird and its habitat must be included in this plan. This attests to the importance of the document.

Identification of critical areas

Although the main conservation measures proposed have focused on the SPAs inhabited by Houbaras, a substantial improvement on this also proposed since the launching of the project was to take into account the whole area occupied by the species, including in this way those underprotected areas that did host birds.

The information obtained from the tracking, censuses, etc. done during the fieldwork phase of the project has allowed us to update our knowledge on the distribution of the Houbara and this has resulted in the drawing of new maps that have served to identify new areas that are important for the species but still lack protection. For instance, those sectors seemingly not particularly suitable but used by the Houbara as "flying corridors" between traditional areas. The main areas of this type have been proposed for protection to the Canary Islands government.
Surveillance of the areas inhabited by the Houbara Bustard, or keeping the plains peaceful and quiet in order to ensure the conservation of the birds

Two wardens hired with this purpose have been walking the distribution areas of the Houbara in Fuerteventura and Lanzarote islands informing passers-by of the importance of respecting and taking care of the steppic sites and, if serious damage to the birds or habitat is detected, contacting the authorities (the service for the protection of nature of the Civil Guard body -SEPRONA-, the people in charge of environmental affairs in the different councils, etc.). Although surveillance was continuous special attention was paid during the breeding season, when the species is particularly vulnerable, as well as during the hunting season. At the same time that we strived to maintain the steppic environments peaceful, during these past few years also we collected information that has made it possible to get better in-depth knowledge on the main threats to the species. This has proven very useful for improving the measures proposed in the afore mentioned plans for the recovery of the species and for the management of the farm.

Signposting of the main Houbara areas, or suggesting not to leave the paths to avoid disturbing the birds

With a view to deter people and vehicles from passing through, signs were placed along the main paths and roads as a complement to the presence of wardens. Zones of strategic importance and those with a higher abundance of circulation were selected for it. With the support of the councils involved, a total of 295 signs were posted: 182 in Fuerteventura and 113 in Lanzarote. These signs advice in several languages not to leave the main paths to avoid damaging the fauna and flora. Except for a few cases this measure was well received among the local and tourist population and resulted in a reduction of damage after the placing of signs.
One of the studies carried out has allowed us to observe the high mortality of birds due to power and telephone lines, in most cases because they collide with these. After inspecting the fields alongside some 482 kms. of lines in Lanzarote and Fuerteventura, 628 remains of dead birds of at least 33 different species were found. However, it is estimated that within a year this amount will be higher and it will surpass 3,000 birds: a frightening quantity that will have a high impact on the conservation of the birds. After the Stone Curlew and the Feral Pidgeon, the Houbara was the species most affected by this factor. Although 82 specimens dead by collision - a 13,1% of the dead birds and almost a 10% of the species total population - were found under the lines during the main inspection, the total amount during the duration of the project was 141 Houbaras.

SEO/Birdlife maintains a line of action at a national level with regard to power lines. The seriousness of the above mentioned data has been exposed publicly, what has served to propose measures for the marking or burying of the “black spots” or most dangerous stretches of lines, that cause most of the deaths. The meeting held for this purpose with the company that owns the lines (Unelco-Endesa) have given way to a plan to start such actions gradually in 2008, although details have not been agreed so far.
Together with conservation actions, increasing knowledge on the species has been another main objective of this LIFE project, as some of the most relevant aspects of the ecology of this bird were hardly known. So, with the cooperation of members and collaborators of SEO/Birdlife, four general censuses - two in winter and two in summer - were carried out by the method of covering by foot the plains occupied by the species counting the specimens present in the three islands. From those results it can be estimated that the population would be around a thousand birds distributed among La Graciosa island (less than 20 birds), Lanzarote island (over 700 birds) and Fuerteventura island (around 400 birds). As previous censuses indicated, there are less Houbaras in this last island than in Lanzarote. Some of the explanations for this that can be offered speculatively are the existence of larger cultivated areas in Fuerteventura, the smaller occurrence of cattle farming and lower degree of desertification in Lanzarote, etc.

As a complement, a seasonal tracking of the Houbara population was established during two years. This was done by a covering by vehicle a network of itineraries along already existing paths. With this method a higher result was obtained also in Lanzarote (a general average of 0,96 Houbaras/km in Lanzarote compared to 0,28 in Fuerteventura). A wide range in the spatial and temporal results was also detected, reflecting important seasonal movements between the breeding areas and those others used during the rest of the year. This comes to prove the importance of conserving not only the best areas but also those that are less suitable. The yearly rain patterns also explain partly the results of these countings and come to reflect the importance of rain in this type of xeric environments.

In all the zones covered by vehicle a study of different environmental variables - like vegetation type, availability of food, substrate type and relative abundance of competitors (rabbits, goats, etc.) - related to the areas inhabited by the species was carried out.
The significant amount of information collected gave way to detailed analysis that points at, for instance, a higher average of plant coverage in La Graciosa, where plants are taller and less spread out than in the rest of the islands, or a medium coverage with more sparse and lower plants in Lanzarote than in Fuerteventura. The final step in this case has been to relate those variables to the abundance of Houbaras. The type of substrate has proven of great significance to the species, although the most significative relations vary from island to island. So, in Fuerteventura the flowering of the gorse and the fruit of the sea buckthorn - two plants included in the diet of the Houbaras - have great importance. In Lanzarote, however, both the type of substrate and the abundance of cattle explain the variation in numbers of Houbaras. The plant coverage plays also an important role in this respect.

Another aspect researched is that of reproduction, devoting part of the research to getting to know the spatial distribution of reproductive males by the identification of their territories, together with the search for nests and the observation of families of birds. In this case particular attention has been paid to avoiding any disturbance to birds, and unseen before information of great relevance has been collected. The mating period of the species extends from the end of November to July and the birds are, consequently, most vulnerable during these months.

Via the counting of birds we have found out the composition of the bird communities of the environments inhabited by the Houbara. Both the Lesser Short-toed Lark and the Berthelot’s Pipit are the most frequent birds in the observed plains, although up to 47 species have been spotted. In comparison, the communities in Fuerteventura show higher rates of bird abundance and a greater diversity than those in Lanzarote and La Graciosa. Autumn was the season when maximum values were reached, in coincidence with the grouping patterns of most of the nesting species and with the post-nuptial presence of migrants that stop-over in the islands.
In this aspect there has been cooperation from ADERLAN, the Society for Rural Development in Lanzarote, that has been in charge of studying traditional agricultural systems and of analysing the feasibility of an agro-environmental programme. Such programme envisages the recovery of produce traditionally grown in the areas where the Houbara is present like lucerne, chickpeas, beans, lentils, peas, barley and sweet potato. Among the results obtained it can be underlined that both islands have experienced a dramatic reduction of farmed land. It is estimated that in the last decade farmed land in Lanzarote has decreased in 4.7%, with the surface dedicated to produce linked to the Houbara (lucerne, pulses and cereal) now amounting to 644 hectares, while the situation in Fuerteventura is even worse, with a loss of 17.5% of farmed land and just 242 resulting hectares, that are dedicated mainly to the growth of lucerne for the feeding of goats.

According to the majority of farmers interviewed for this study, the Houbaras do not cause significant harm to produce and their presence in them is not excessive, which is a positive factor for the conservation of the species. Besides, most of that farming is dry-land cultivation and, as a matter of fact, ecological because hardly any agrochemicals are used in them. Yet another positive factor is the good acceptance of the local varieties under research although the average cost by hectare planted with this produce does not benefit the farmer, this being the main cause of the crisis in the sector. The analysis of existing funding and the attitude of farmers show wide misinformation, partly because of the little information that administrations give but also because of their scarce involvement in these funds, mostly European (Feoga, Leader Plus, Feader, etc.)

In view of the previous conclusions, nine areas between both islands have been selected where farmed land could be increased and birds favoured and a total cost has been estimated so that it would be profitable for the farmers. In this respect Feader funding together with aid from the two islands’ councils would be necessary. We would like to point at the need to create some sort of quality control stamp of approval for these farms and to search for distribution channels specialized in produce with an ecological quality stamp that committed to pay fair prices. In this case, the boost that local markets are experiencing in both islands could finally lead to a satisfying solution.
With the first results that were obtained an ambitious educational and awareness raising campaign was launched among the local and tourist population in order that they got to know better and to respect the steppic environments and the living beings that inhabit them, specially the birds and the Houbara among them. Two environmental trainers were in charge of giving talks, doing presentations and carrying out diverse educational and awareness raising activities in La Graciosa, Lanzarote and Fuerteventura islands. Numbers speak for themselves but special emphasis was put on school age population: some 500 talks were given, in practically all the schools of the above mentioned islands, and several workshops, fairs, workcamps, etc. for schoolchildren were organised. Special promotional material was issued for this aim: stickers, posters and colour-in booklets. The meetings with delegates from CEPs, teachers’centres, and from the Education Council of the Government of the Canary Islands proved particularly useful: their objective was to link environmental aspects to the curriculum and to include these in the contents of some of the course subjects. like Knowledge of the Environment**** and Canary Islands Questions***.
For the adult population talks were given in social and cultural centres and in neighbours’ associations quarters and stickers, posters and leaflets in several languages were issued. These were placed -clearly signed with the Houbara outline logo- in harbours, airports, hotels, interpretation centres, car rental companies, etc. in order to disseminate information. Meetings were held also with those responsible in the tourist industry (tour operators, tourist guides, hotel managers, tourist offices...) in both islands with the aim of raising awareness also among tourists and companies and staff of this sector as regards the importance of conserving the environment of the islands for the benefit of all, but making special emphasis on steppic environments and their inhabitants. As a complement, two spots of different length were broadcasted in most local TV channels, aboard the planes of several airlines -like Iberia or Spanair- as well as in fairs, courses, hotels, schools, etc. All this material was distributed also among public administration bodies, diverse associations, hotels and companies in the tourism sector, libraries, cultural centres, etc. with a view to reaching maximum diffusion.

Far from maintaining the project in the shadow, the greatest possible involvement of all direct or indirect stakeholders in the conservation of the species and its habitat has been sought. Public administration bodies, the education community, farmers, cattle farmers and hunters associations, cultural and neighbours associations, companies and people related to the tourist industry, media, etc. have been taken into account. For this reason the main events of this LIFE project have been presented publicly and, judging from the media coverage obtained, the general opinion on them has been good. To continue with the most practical tools to communicate results, a webpage of the project - www.seo.org/lifehubara- was created and is regularly updated in English and Spanish to include new developments.
The conservation in the long and mid-term of this majestic bird, a symbol of the step-pic plains of the Canary Islands, is linked to the taking of the following priority actions:

- The approval of the Recovery Plan so that the implementation of measures for the conservation of the species is guaranteed.
- An increase in the surveillance of the critical areas
- Clearly marking and burying the most dangerous stretches of power lines for the species, so that the impact of these lines on the Houbara population is avoided or at least lessened
- The continuation of the environmental education campaigns launched in the last few years as the main way of guaranteeing the conservation of the species and of step-pic habitats in the island in the mid and long term.

For further information:

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