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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

40th meeting
Strasbourg, 1-4 December 2020

REPORT
ON THE SPOT EXPERT APPRAISAL OF THE
DOÑANA NATIONAL PARK
(SPAIN)
24-25 July 2019

*Document prepared
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1. Introduction and historical reminder regarding the application for the Diploma and its successive renewals

1983

Under the title “Type of natural area, site or feature”, the applicant states “wetland, mobile dunes and sand stabilised by matorral” (in document SN-ZP (83) 26 of the Council of Europe). In the appendix 1 (on the general description of the national park) of the same document, we can further read that the scientific interest is extremely high, that “the park contains a series of primitive ecosystems whose fauna, flora and geomorphological formations are of great ecological value”. In appendix 2, we find a detailed description of the ecosystems in the national park, and in appendix 3 a list of species of fauna in the national park.

Furthermore, the application document tells us that the aesthetic interest is extremely high, because of the survival of three very diverse ecosystems and the quality of the landscape (dunes, marsh and matorral) and that the cultural interest is extremely high as well, “with abundant archaeological remains and the preservation of traditions and customs which have survived nowhere else”.

The region was the gateway to America for more than two hundred years.

The park is also of utmost importance for matters related to the biological sciences and their interpretation.

Finally, the “recreative interest” is also extremely high; the document mentions in this regard the Romería del Rocío, also noting that “more than a million people visit the park and its surroundings” [in the 1980s!].

Under the title “European interest justifying the application”, we read that the area holds a concentration of African species migrating to Europe and vice versa, is a very important wintering area for numerous European species and relevant for the survival of species found nowhere else, such as the Spanish Imperial Eagle (*Aquila heliaca adalberti*) and of other species that are severely endangered in Europe, such as the Pardel Lynx (*Lynx pardina*), the Mongoose (*Herpestes ichneumon*), the Purple Gallinule (*Porphyrio porphyrio*) etc, as well as unique plant species such as the toadflax (*Linaria thursica*). Doñana retains one of the few mobile dune systems in the Iberian Peninsula. The active dune area covers a strip parallel to the coast, some 20 km long and up to 5 or 6 km wide. “Marismas (marshes) make up the largest and also the most important ecosystem in the national park. In their present form, which is filled in and away from tidal influences, they constitute a badly-drained plain in which the surface water of a vast basin converges along a series of river branches and furrows. Since it is now cut off from the Guadalquivir, whose influence is only apparent on the occasion of major floods, the most important sources of supply are the Travieso, Guadiamar and Madre de las Marismas”.

After their on-the-spot appraisal visit in the same year (SN – ZP (83) 34), Paul Géroutet (independent expert) and Jean-Pierre Ribaut (secretariat of the Council of Europe) confirm the European importance and the multiple interests of the site put forward by the applicants. Furthermore, they indicate that the area is managed, surveyed and studied in an exemplary way and therefore recommend the award of the European Diploma category A. They propose the following recommendations: the adoption of the master plan by the Spanish authorities; the provisioning of the necessary financial means to implement it; the designation of additional areas to complete the buffer zone (pré-parc), in particular on the left bank of the Guadalquivir upstream of San Lucar de Barrameda.

1989

The European Diploma award was renewed in 1989 after a further on-the-spot appraisal visit by Francis Roux (independent expert) and Jean-Pierre Ribaut (secretariat of the Council of Europe). In their report (document PE-ZP (89) 31), the authors mention the following observations. “One of ICONA's priority objectives is to obtain a regional development plan consistent with the upkeep needs of the Park. In fact the only real problems the managers encounter are of a peripheral kind: they are associated with farming methods and the monitoring of the waters in the surrounding sectors, as well as with the expansion of crop farming and human pressures: these are all matters that come within the purview of the regional authorities, and there is little that ICONA can do about them.” [ICONA was the *Instituto para la Conservación de la Naturaleza* (Nature Conservation Institute) that was the administrative entity established in Spain from 1971–1995 in order to preserve and research the natural environment in the Spanish territory (Wikipedia).]

The authors of the report further mention that the abundance of wild ungulates was having a very visible effect on the environment and that this was a cause of concern to the managers. A hunting plan had been submitted to the Steering Committee.

Water volume and quality control are a crucial aspect of conservation in the Park since the functioning of the main ecosystem depends on it. The catastrophic drought in the 1980s, and its effects on the flora and fauna (trees, bees and birds dying; 10,000 greylag geese starving to death, etc) is still present in everyone's minds. With the new equipment on the Cano de Guadiamar to regulate the flow of water, ICONA is better equipped to alleviate the effects of a phenomenon of this kind, should it recur.

But climate is not the only hazard: a further threat was posed by the increasing use of the groundwater for agriculture and domestic consumption in the area surrounding the Park. The IUCN had been making inquiries about a vast irrigation and hotel-building project that seemed likely to jeopardise the ecotone near to El Rocio. However, ICONA had secured the regional authorities' agreement to reduce the irrigated areas from 14,000 hectares initially planned to 7,000, thus halving the volume of water pumped out of the hydrographic system and the groundwater bodies.

The farming methods employed in the areas under cultivation upstream of the Park represented a further risk factor because of their effects on water quality. Evidence of this came to light in 1986 when organophosphates were sprayed from the air in a drive to control the crayfish (*Procambarus clarkii*) that were causing damage to the rice fields and dikes. Between 20,000 and 25,000 birds, mainly ducks and coots, died during this campaign which was, incidentally, illegal. Those responsible have been prosecuted

Inside the Park, the pressure of tourism was kept within bounds and had no impact on the habitats and natural processes.

1995

In view of the renewal of the Diploma, an appraisal visit was paid to Doñana in 1994 by the expert Francis Roux. In his report (document PE-5-ZP (95) 42), - from which I quote or paraphrase in the following lines - the expert noted that since the renewal of the Diploma in 1989, marked progress had been made both from the point of view of the internal running and management of the Doñana National Park (DNP) and from the point of view of limiting public pressure on the surrounding areas, in line with the recommendations made five years earlier, namely:

- to reduce intensive agriculture around the park;
- to strengthen quantitative and qualitative controls on water use;
- to pursue the landownership and ecological restructuring policy.

The latter issue is the only one over which ICONA, the body in charge of the management of the DNP, had sole and direct control. The other two related to problems originating outside the park and were therefore the responsibility of the regional authorities. Their resolution had required active co-operation between ICONA, the agriculture services of the Andalusian Regional Government and the Guadalquivir Basin Agency.

Underground water represents only a tiny fraction (1 %) of the total volume of water entering the DNP, but it is vital for ecotonal life and to feed the peridunar lagoons. A piezometric monitoring system was to be set up, consisting of 30 automatic measuring points, each operating at three different depths.

With the reduction of intensive agriculture in the north-west of the park, there had been a decrease in the use of pesticides. Elsewhere, in the catchment basin there was virtually no risk of pollution since the land was mostly wooded. Consequently, these areas were not only exempt from agro-chemical treatments, they also act as a natural water filter. The only possible source of pollution in this sector was sewage from the villages, which, in 1995, was either already treated, as in Almonte or was soon to be so. Rice is the crop which required the most pesticides, but the rice fields did not drain into the Park and its catchment basin.

“The most monitored wetland area in the whole of Spain, Doñana is also the area where water use issues are followed most strictly”. The 1978 Act on the National Park stipulates that the Steering Committee must be informed on any activities which might affect water quantity or quality in the area, no matter how small. “One could go so far as to say that not a single drop of water is used without the approval of the Steering Committee”. As an advisory body, it does not have any legal power, but it does have considerable moral authority. In most instances, the Guadalquivir Basin Agency, the decision-making body, follows its recommendations. A surveillance network ensures that irrigation abuses do not take place.

As in any other Mediterranean-type wetland area, flooding is irregular and unpredictable. “The instability of the *marismas* ecosystem is fundamental to its functioning and a condition for biodiversity”. Attempts to compensate for the effects of the summer dry period, in order, for example, to maintain habitats favourable to aquatic birds were a disaster: in overheated marshes, water is low in oxygen and botulism develops. “The role of Doñana is not primarily to protect birds or particular habitats, but to ensure the continuation of natural processes, including periodic flooding and dry periods”.

Moves to create a Regional Nature Park around the National Park came to fruition in 1992. The nature park covers 54,000 hectares, comprises four sections spread over three provinces (Huelva, Seville and Cadiz) and encompasses nine municipalities. It has a mixed system of land ownership, with 19,000 hectares under public (State or municipality) ownership and the rest under multiple private ownership. It is intended to act as a buffer zone around the DNP by encouraging activities which are compatible with its requirements and restricting or banning any other, incompatible activities.

The major activities are forestry, rice-farming and low impact livestock farming. There are also 8,000 hectares of saltworks and aquafarming (prawns) on the left bank of the Guadalquivir. The activities carried out on private landholdings, which can be as large as 1,000 hectares, are monitored by the Nature Park wardens. Approval must be sought from the authorities before any changes are introduced.

Policing measures and staff at the time of the visit in 1995: the park employed 140 permanent staff including 60 rangers (as opposed to 47 in 1988). It also took on 400 seasonal workers. As the largest enterprise in the region, it wielded considerable socio-economic power.

The concerns that were expressed about the conservation of the DNP at the beginning of the decade, as a result of external threats, no longer apply in 1995. Coastal tourist development and golf courses are no longer on the agenda. The seaside development at Matalascañas, originally intended to cover 7 km, has been restricted to 4 km and a hydro-agricultural development zone of 14,000 hectares has been reduced to 4,000 hectares pending its transfer to a more distant sector. On the other hand, the protected area has been steadily expanded: the original core of three biological reserves covering 10,000 hectares has grown into a national park of 50,500 hectares, which is now surrounded by a regional nature park of 54,000 hectares. The addition of this protective buffer zone, where activities are restricted so as to bring them into line with the aims of the DNP, means that the Doñana National Park had become the "Doñana Area". The expropriation of privately-owned land was nearing completion, as was the ecological reconstruction of habitats. Conservation measures continued to be taken for flora and fauna and demonstrate that genuine expertise has been developed. The problems connected with water supply to the marshes, which caused so much concern, were unlikely to worsen, and could be resolved by reconstituting the old hydrographic system of the Guadiamar. Lastly, an effective channel of communication had been set up between the Park management and the regional authorities responsible for the Nature Park, which means that conflicts could be resolved satisfactorily.

The expert made two recommendations to the Government of Andalusia, which would both involve measures in its field of competence, namely:

1. to re-establish the historic hydrographic system by which the Guadiamar river supplied water to the marismas and also to seek to re-establish the historic quality of the water itself;
2. to extend the natural park towards the north-west in order to close the protective buffer zone around the national park

1998

On 24 April 1998, the wall enclosing the settling pool of a pyrite mine, Aznalcollar, 30km north-west of Seville, and 60 km north of the north-eastern boundary of the Doñana National Park, Andalusia, burst. 5

million cubic metres of acidic waters and sludge containing the residue of heavy metals flowed through the gap. This toxic wave flowed to the confluence of a water course and of the Guadiamar River, a tributary of the Guadalquivir and one of the main rivers flowing into the hydrographic system of the Doñana National Park, which is 60 km downstream from the site of the accident.

The sheet of sludge halted 16 km from the northern boundary of the National Park. However, the wave of acidic waters carrying solute heavy metal-bearing sediments flooded beyond that point: it overran the dyked-up corridor of Brazo de la Torre, flooding it over an area 15 km long by 1 km wide. Fortunately, the dykes of this area, known as “*entremuros*”, contained the toxic floodwaters, preventing them from reaching the National Park (although this information is disputed, see below). In order to prevent the waters from entering, earth embankments had been hastily erected at the Doñana National Park’s northern boundary, and all the sluice gates in the hydraulic system had been closed.

On the other hand, the Doñana Biological Station claimed that the contaminated waters entered the National Park at Brazo de la Torre and Lucio del Cherry as a result of the ebb of the current at high tide. Three areas were contaminated in this way: the banks of the Brazo de la Torre, the Lucio del Cherry and 300 ha of Lucio de Matochar.

32 species in Doñana were known to eat the red swamp crawfish (*Procambarus clarkii*). In September 1998, the concentration of heavy metals in this crawfish was 30 times higher than normal (5gr of arsenic per kg, according to oral information provided to the expert).

In order to evaluate the situation after the disaster, the Council of Europe organised an extraordinary appraisal visit by the experts Francis Roux (F) and Ernst P. R. Poorter (NL), whose report is reflected in document PE-S-DE (99) 66.

Based on this report, the Group of Specialists for the European Diploma concluded with a set of statements (called “Draft Opinion”, in Appendix 2 of document PE-S-DE (99) 66), one of them inviting “the authorities to continue their efforts to restore both the disaster-stricken area and the original hydrographic system of the swamps, as requested at the time of the last renewal (cf. Resolution (95)13), in particular by implementing the “Green Corridor” and “Doñana 2005” projects”.

2005

In view of the renewal of the Diploma in 2005, an appraisal visit was carried out by the expert Michael B. Usher (U.K.) in 2004. The expert found that most of the previous conditions and recommendations had been fulfilled or nearly fulfilled or at least worked upon. Based on his report contained in document PE-S-DE (2005) 4, the Group of Specialists for the European Diploma proposed the renewal of the Diploma and attached, nevertheless, a set of conditions and recommendations, which were formally adopted in resolution ResDip(2005)3 of the Council of Europe.

2010

According to Resolution CM/ResDip(2010)13, the European Diploma was further renewed in 2010, apparently without an on-the-spot appraisal and apparently without evaluating whether the conditions and recommendations attached to the renewal in 2005 had been worked upon, but taking into consideration both the discussion held between the Secretariat and the site manager and the advice of the Group of Specialists of the European Diploma and having regard to the proposals of the Standing Committee of the Bern Convention. The Committee of Ministers attached two conditions and seven recommendations to the renewal.

Results of the interviews during the visit

Two of the four municipalities (ayuntamientos) that share the area of the National Park were represented. The mayor of Almonte, which covers half of the area of the Park, had only positive feelings with regard to the contribution of Doñana National Park (DNP) to the local economic and social situation in her community. This positive note was confirmed by the councilor of the municipality of Puebla del Río,

holding the smallest part of the DNP area. The mayors of the two other municipalities could not be present but offered to respond to the expert's questions by other means.

The representatives from World Wide Fund for Nature (WWF) Spain and from Ecologistas en Acción were very concerned with the present situation and future of the DNP particularly with regard to the water regime in the area, i. e. the unsustainable legal and also illegal pumping of water from the aquifer for agricultural purposes. Further threats were military projects, gas storing projects, the increasing traffic and lack of adapted speed reduction on the road to Matalascañas and the uncontrolled development of the Romería bringing disturbance to the nature (including disturbance of breeding bird colonies) and garbage. Both organisations have repeatedly alerted the public and the authorities at different levels as well as international organisations on problems and threats to Doñana. They also have responded to measures initiated to solve the problems and sought to contribute to solutions. However, I had a feeling of some problems in the communication between the DNP authorities and the NGOs as facts seemed to be understood in divergent ways leading to contradictory positions. Nevertheless, the alerting affirmations of the nature conservation NGOs as to the dangers threatening species and their habitats in the Espacio Doñana and surrounding areas have to be taken seriously and explored with further scientific research and monitoring.

I had a similar feeling of some difficulties in the communication, including contradictory interpretation of scientific and technological findings, between the DNP authorities and the Doñana Research Institute (Estación Biológica de Doñana, EBD). The director and the deputy director of the EBD mentioned problems with the ecological situation in the marshes (marismas), important threats to some species and groups of species (e. g. *Marmonetta angustirostris* and *Odonata*) and in general a worsening of the situation of herbivorous birds while carnivorous birds tended to do better. These findings were not all confirmed by the DNP manager. The DNP manager did not agree either with the interpretation of the findings of the EBD with respect to the ground water situation. The EBD is of the view that in spite of a rainy period during the first half of the 1990s the ground water levels have further decreased, notably due to unsustainable water extraction for agriculture west of the DNP. It is worth remembering at this stage that the EBD is independent from the DNP.

The discussion with the representatives from the economic organisations of the region was very constructive. I gained the impression of an almost unanimous positive sentiment with regard to the DNP. In particular, the restrictions imposed by the management of the DNP, especially with respect to land use, were apparently well accepted. Although the Park and its various attractions are beneficial to touristic activities *per se*, restrictions in other domains of tourism due to nature protection needs are not considered as handicaps. There are 19 touristic enterprises in the region. Similar conclusions come from cattle breeders: they consider cattle breeding as a tradition, as a part of cultural life, with special local breeds and are aware of the ecological services provided by cattle grazing and that it contributes to the functioning of the marismas. Apart from cattle breeding, there are three more economic activities, all equally respecting the rules of nature conservation in the Park, namely bee keeping and the collection of mussels and pine kernels.

All stakeholders are represented in the Council (70 members), which is currently chaired by the director of the Doñana Biological Station.

The Doñana National Park is a Biosphere Reserve (since 1980) and a UNESCO World Heritage site (since 1994), a Ramsar site, a NATURA 2000 site, and it is on the IUCN Green list (since 2015).

2. Follow up on conditions and recommendations from the last renewal in 2010

Conditions

- 1. The Spanish authorities should continue to take all necessary measures to ensure that the Port of Sevilla development projects have no significant environmental impact on the Doñana ecosystems. Any decision should be conditioned by the results of a complementary study to the Environmental Impact Assessment (EIA) report;*

According to what I heard from the DNP manager, the Port of Sevilla development projects have been abandoned. According to WWF Spain and Ecologistas en Acción, however, the State's assertions have not

been confirmed by solid administrative acts and the project theoretically still holds approved and valid administrative permits.

2. *The Andalusian Government, responsible for the management of the national park and also for water management, should ensure the high quality of water entering the national park and eliminate the illegal extraction of groundwater; in accordance with the Water Framework Directive, it should monitor the status of the aquifer underlying the national park and surrounding lands, the extent of groundwater extraction and the water quality.*

According to what I heard from the DNP manager, the elimination of illegal extraction of groundwater is in good progress, although or rather thanks to the fact that, in January 2019, the European Commission has referred Spain to the Court of Justice of the EU over a failure to take adequate measures to protect the groundwater bodies that feed the Doñana Wetlands, as required by EU water legislation Water Framework Directive, ([Directive 2000/60/EC](#)). A monitoring system is in place that guarantees the necessary overview of the water situation. On the other hand, WWF Spain affirms that the illegal and unsustainable use of water is severely affecting Doñana's natural assets, and significant changes have already been observed, including the loss of biodiversity (which they did not name specifically) and the drying up of several lagoons. The recognition and interpretation of the dangers and risks derived from the observations on the situation of the quantity and quality of superficial and groundwater systems and their use, in particular for agricultural purposes, appear to be seen in variable ways by international organisations. While the European Commission has taken Spain to the European Court of Justice for failure to protect Doñana's wetlands on the basis of the Birds and the Habitats Directives (Doñana being a NATURA 2000 site) and on the basis of the Water Framework Directive, UNESCO has not placed Doñana on the list of threatened sites. However, it had been listed on the Montreux Register of the Ramsar Convention in 1990 already. On the other hand Doñana is on the IUCN Green List.

Recommendations

1. *all efforts should be made to restore the good ecological state of the river at the level of its catchment (river basin or water basin), within the meaning of the Water Framework Directive; all appropriate measures should be taken in order to make water use and other activities, especially agricultural activities, in this catchment (basin) compatible with this aim;*

The protection of forests, the expansion of the Natural Regional Park and the Corredor Verde project are all contributing to the restoration of the good ecological state of the rivers at the level of their catchment. According to WWF Spain, two hydrological plans were approved for the Guadalquivir River Basin Management from 2010 to 2019 but none includes a specific section for Doñana.

2. *a specific emergency plan for the Doñana National Park should be prepared and a map of natural risks should be drawn up;*

An emergency plan for the DNP has been worked out; potential natural risks have been identified. According to WWF Spain, only a plan against the risk of oil spills has been developed, but not a real Emergency Plan for risks other than hydrocarbons.

3. *the implementation of the action plans for the conservation of the flagship species, in particular the Iberian lynx and the Imperial eagle, should be actively pursued; new action plans for other threatened species should be drawn up if needed;*

The implementation of the action plans for the conservation of the flagship species Iberian Lynx and Imperial Eagle is in progress. Further efforts are still needed, in particular to improve the situation of the rabbit (an essential prey for the Lynx and also important for the Eagle) and also to take measures against the numerous road kills of the Lynx. Other species would definitely need special conservation measures, such as the Marble Teal, the Red Kite and Dragonflies.

4. *concerning the Port of Sevilla development projects, the Spanish authorities should avail itself of the best international scientific expertise and also take account of the relevant international conventions, such as the Ramsar Convention, the World Heritage Convention and the Bern Convention, and work closely with the relevant international bodies, including the European Union and the European Environment Agency;*

As stated with respect to condition one, the Port of Seville development project has been stopped.

5. *the updating of the management plan should be started in 2011;*

In 2016, the new plan for the Doñana Natural Area (PRUG) was approved through Decree 142/2016, of 2 August 2016.

6. *the extension of the Doñana 2005 Project to riparian vegetation, correcting erosion problems or extending its scope to adjacent areas of agricultural marsh, should be undertaken;*

The protection of forests, the expansion of the Natural Regional Park, the extension of the Doñana 2005 Project, the Doñana 2021 Project, the Corredor Verde project and the Forest Crown of Doñana Special Management Plan are all contributing to the restoration of the good ecological state of the rivers and riparian vegetation. However, WWF Spain is of the view that the Doñana 2005 project was not extended.

7. *the possibility of developing co-operation with other European Diploma sites which are deltas, such as the Camargue National Reserve (France) or the Danube Delta Biosphere Reserve (Romania), should be explored.*

The development of co-operation with other European Diploma sites that are deltas, such as the Camargue National Reserve (France) or the Danube Delta Biosphere Reserve (Romania), has been explored. Co-operation has existed for decades with the Tour du Valat Biological Station in the Camargue.

3. Conclusions

From what I have seen during my visit and from what I have heard from the Doñana National Park authorities and from stakeholders, I conclude that what was stated about the high scientific, aesthetic and cultural interests of the Park and its European importance when it was awarded the European Diploma is still valid. The Park is very well managed in a sensitive equilibrium with economic and social activities in the region.

As stated during the on-the-spot appraisal visit for the first renewal of the award, the only real problems the managers encounter are of a peripheral kind: they are associated with farming methods and the monitoring of the waters in the surrounding sectors, as well as with the expansion of crop farming and human pressures.

Agriculture and the use of water including from the aquifer, above all human activities, have a strong impact on the ecosystems, and thus on the biodiversity, of the area surrounding the Doñana National Park and to some extent also impact on the ecosystems, and thus on the biodiversity, of the area of the National Park itself. There was a time in the recent past when one could fear that these impacts could be a threat to the survival of nature in the Park and its surroundings. The manager of the Doñana Space (Espacio de Doñana, including the National Park and the Nature Park) could show me with evidence from several scientific studies and reports that the situation has improved, and is still improving, in a way that allows me to affirm that the Doñana National Park is presently not at risk of being destroyed or even severely damaged. There are still efforts to be made, the situation has to be monitored thoroughly and a constructive dialogue with all players has to be constantly renewed, which I am confident is the case presently. Apart from the water quantity and quality in the area, other named projects (like gas storage or the reopening of the Aznalcóllar mine or the reconsideration of the Port of Seville project or military projects) but also unmanageable risks, notably in relation with seismic activities or climate change remain to be taken into account. Other types of human pressure like urbanisation, the impact of infrastructure (especially the road to Matalascañas;

according to nature protection organisations WWF and Ecologistas en Acción, 42 % of the known non-natural mortality of Lynx are road kills) and the Romería have to be monitored, and action will have to be taken if necessary. Concerning the habitats and certain species, monitoring efforts should be pursued, existing action plans implemented and when necessary revised or new action plans developed. Communication is an important tool in nature conservation. The Doñana National and Nature Park (Espacio Doñana) has good communication tools and activities at multiple levels but more could be done, notably for the sake of an even better acceptance of the Park with all rules and constraints among the local public. It seems awkward that, according to nature protection organisations, 16 % of known non-natural mortality of the Lynx is due to poaching. More efforts to sensitise the public could perhaps have an impact on this avoidable threat.

I understand that the Park manager has to put the conservation of the Espacio Doñana in the economic and social context of the region and therefore seek compromises in the implementation of measures that have an impact on economic activities (like the strict application of rules in the use of water in relation with agriculture), while other stakeholders, in particular nature conservation organisations like WWF and Ecologistas en Acción can and have to be more demanding -- it is their role. It is important to put the finger on failures when e. g. the application of rules and laws does not happen strictly and fast enough (e.g. in the case of the stopping of illegal water bores). I wish that they continue to observe the situation and to intervene in an alerting way, although what is possible is not always easily feasible (like the restoration of the former 130'000 ha of marismas or the rehabilitation of the complete Guadalquivir estuary).

The Park manager would like a better coordination between the different organisations that have shown a particular interest in the site, especially when it comes to on-the-spot appraisals, visits and the evaluation of particular situations or incidents (e.g. the Aznalcóllar accident). He would also value a more visible and active network of the sites holding the European Diploma that would promote the exchange of information and experience. At this stage, it is worthwhile remembering that the Doñana National Park is a UNESCO Biosphere Reserve (since 1980) and a World Heritage site (since 1994), a Ramsar site, a Natura 2000 site and is on the IUCN Green list (since 2015).

From a scientific point of view, several issues deserve thorough/more attention and efforts: the impact and possible increasing effect of invasive alien species, the reasons for the bad situation of the rabbit population, the impact of herbivores on the ecosystems, and forecast of climate change effects (decreasing pluviometry, increasing evaporation), the latter being of special concern with respect to the lagoons.

Existing threats: According to WWF Spain, industrial threats are growing - the reopening of the Aznalcóllar mine continues to advance, as well as the natural gas storage projects that remain in progress despite their risks for Doñana.

All details about conservation issues and the way they are proposed to be dealt with can be looked up in the Management Plan for the Espacio Doñana (PRUG) adopted in 2016 and valid until 2025: http://www.juntadeandalucia.es/medioambiente/portal_web/web/temas_ambientales/espacios_protegidos/pla_nificacion/porn/2016_porn_prug_espnat_donana/decreto142_2016_end/5_anexo6_prug_donana_boja.pdf

Altogether, from what I have seen, heard and learnt during my visit and after reading many documents, I propose a series of recommendations that could help the manager of the Doñana National Park and the Espacio Doñana secure the conservation of the site, but I do not see the urgency of suggesting any conditions for the renewal of the Diploma. I therefore recommend renewing the European Diploma for another ten years.

I propose a set of recommendations that should help the Park authorities and the stakeholders of the National Park and its surroundings pursue the conservation of nature in this exceptional area while retaining sustainable economic activities and a high social standard in the region.

4. Proposed recommendations

1. Continue to monitor the identified risks of possible damages to Doñana from known sources in the closer and wider surroundings of the Espacio Doñana (agriculture, urbanisation, development of infrastructure), potential risks (from the Pyrit mine at Aznalcóllar or other mining activities, Port of Seville, gas storage, military projects) as well as from climate change;
2. Watch closely the results of the monitoring of the quantity and quality of ground and surface water in Doñana with the aim of evaluating whether the implementation of the Plan Especial de Ordenación de Regadíos” (PEORNCFD) adequately follows the conclusions from the water monitoring;
3. Pursue the projects leading to a better conservation of ecosystems within the Espacio Doñana, in particular through the implementation of the management plan (PRUG);
4. Continue implementing the action plans for threatened species (in particular for the Lynx and the Imperial Eagle, including the recovery or reinforcement of the rabbit population) and develop and implement further action plans as needed for other species (including Marble Teal, Red Kite and Dragonflies *Odonata*);
5. Advertise for the European Diploma wherever possible and sensible with its logo.

Annex 1**Programme of the appraisal visit in 2019****July 24**

9:00 Arrival at the Acebuche Administrative Center, meeting with the Management Team and brief presentation

- D. Juan Pedro Castellano, Director
- D^a. Isabel Redondo, Conservadora
- D. José María Galán, Guía

10:00 Meeting with Mayors

- Excm Ayto de Almonte. Sra. Alcaldesa. Rocío del Mar Castellano
- Excm Ayto de Puebla del Río. Vicente (Concejal)

11:30 Meeting with Nongovernmental Conservationist Organizations

- WWF: Dñ. Teresa Gil
Dñ. Ana Bernabel
D. Juan José Carmona
- Ecologistas en Acción: D. Juan Romero

12:30 Meeting with the Doñana's Biological Station (EBD)

- Director. D. Xim Cerdá
- Subdirector. D. Jordi Figuerola

16:00 Meeting with owners and holders of exploitations

Representante de empresas y aprovechamientos tradicionales:

- Presidente de la Asociación de criadores de ganado marismeño y representante de los titulares de aprovechamientos tradicionales en el órgano de participación en Doñana D. Juan Adolfo Aranguete
- Presidente de la Asociación de empresarios de turismo de naturaleza. D. Juan Bernardo Torre
- Presidente de la asociación de empresarios CEPYME. D. Pedro Roldán

17:00 Visit to the National Park (South Sector)

July 25

8:30 Visit to the National Park (North Sector)

16:30 Meeting with the Park Management Team
Conclusions and final evaluation of the visit