

## Fact-finding visit to Spain

19 - 21 September 2018

### Doñana National Park

Doñana National Park is a natural reserve in Andalusia, southern Spain, in the provinces of Huelva (most of its territory), Cádiz and Seville. It covers 543 km<sup>2</sup>, of which 135 km<sup>2</sup> are a protected area. The park is an area of marshes, shallow streams, and sand dunes in Las Marismas, the delta where the Guadalquivir River flows into the Atlantic Ocean. It was established as a nature reserve in 1969 when the World Wildlife Fund joined with the Spanish government and purchased a section of marshes to protect it. The eco-system has been under constant threat by the draining of the marshes, the use of river water to boost agricultural production by irrigating land along the coast, water pollution by upriver mining, and the expansion of tourist facilities.



Doñana National Park has a biodiversity that is unique in Europe. The park features a great variety of ecosystems and shelters wildlife including thousands of European and African migratory birds, fallow deer, Spanish red deer, wild boars, European badgers, Egyptian mongooses, and endangered species such as the Spanish imperial eagle and the Iberian lynx (picture).

In 1963 the Spanish government and WWF bought part of the territory and created the first Doñana preserve. In 1964 they established the Doñana Biological Station and the Spanish National Research Council (Consejo Superior de Investigaciones Científicas - CSIC) to study the biodiversity of Doñana and other Spanish ecosystems.



In 1969, the WWF again joined forces with the Spanish government to purchase another section of the Guadalquivir Delta marshes and establish the Doñana National Park. That same year the Doñana National Park was created by decree, part of whose territory was owned by the Ministry of Economy and Competitiveness (Ministerio de Economía y Competitividad) and part still in private hands. Ten years later the protected area was expanded and the so-called "Preparque Doñana" was created. In 1980, UNESCO recognised the Doñana National Park as a Biosphere Reserve of 77,260 hectares.

Unesco considers Doñana of world significance, based on the variety of its ecosystems and the wide number of species they harbor. In 1982 it was included in the list of wetlands of the Ramsar Convention, and in 1989 the Regional Government of Andalusia converted the Preparque into the Doñana Natural Park. In 1994 it was listed by Unesco as a World Heritage Site, enabling the establishment of programs to preserve and manage the area. Historically, these vital wetlands have been constantly threatened by schemes to increase local agricultural output and tourism.

Doñana Park has a mild, typically Mediterranean climate, characterized by dry summers and relatively wet winters. The rainy seasons are intermediate, occurring in spring and in autumn. Temperatures are mild throughout the year, with maximum temperatures varying about 17 °C from winter to summer. The most significant feature of the climate is the three to five months of dry weather in the summer, when it is dominated by the subtropical anticyclone.



Doñana's conservation is closely linked to its surroundings: the wetland depends on the maintenance of the quality and quantity of the groundwater table, connected rivers and old tidal plains. However, it faces constant threat – mainly from diversion of river water, and overuse of groundwater for agriculture. Illegal wells and thousands of hectares of illegal strawberry farms have in some areas reduced flows from the aquifer to the wetlands to just 10% of natural levels. Water pollution, fragmentation, and projects like the Guadalquivir River dredging, are also significant threats – resulting in Doñana losing important species like the marbled teal (picture), a critically endangered bird that was once the most common breeding waterfowl in Doñana.

### **Threats and challenges**

Harmful industrial activities, including intensive agriculture and river modifications, have reduced Doñana's water input to fewer than 20 per cent of its natural level. Under natural

conditions, Doñana receives water from the Guadiamar and Guadalquivir rivers, as well as from a large underground aquifer. Repeated river modifications have led to a large reduction in Doñana's water inputs, and intensive irrigation for agriculture has overexploited the aquifer. Today, water levels in Doñana are critically low.

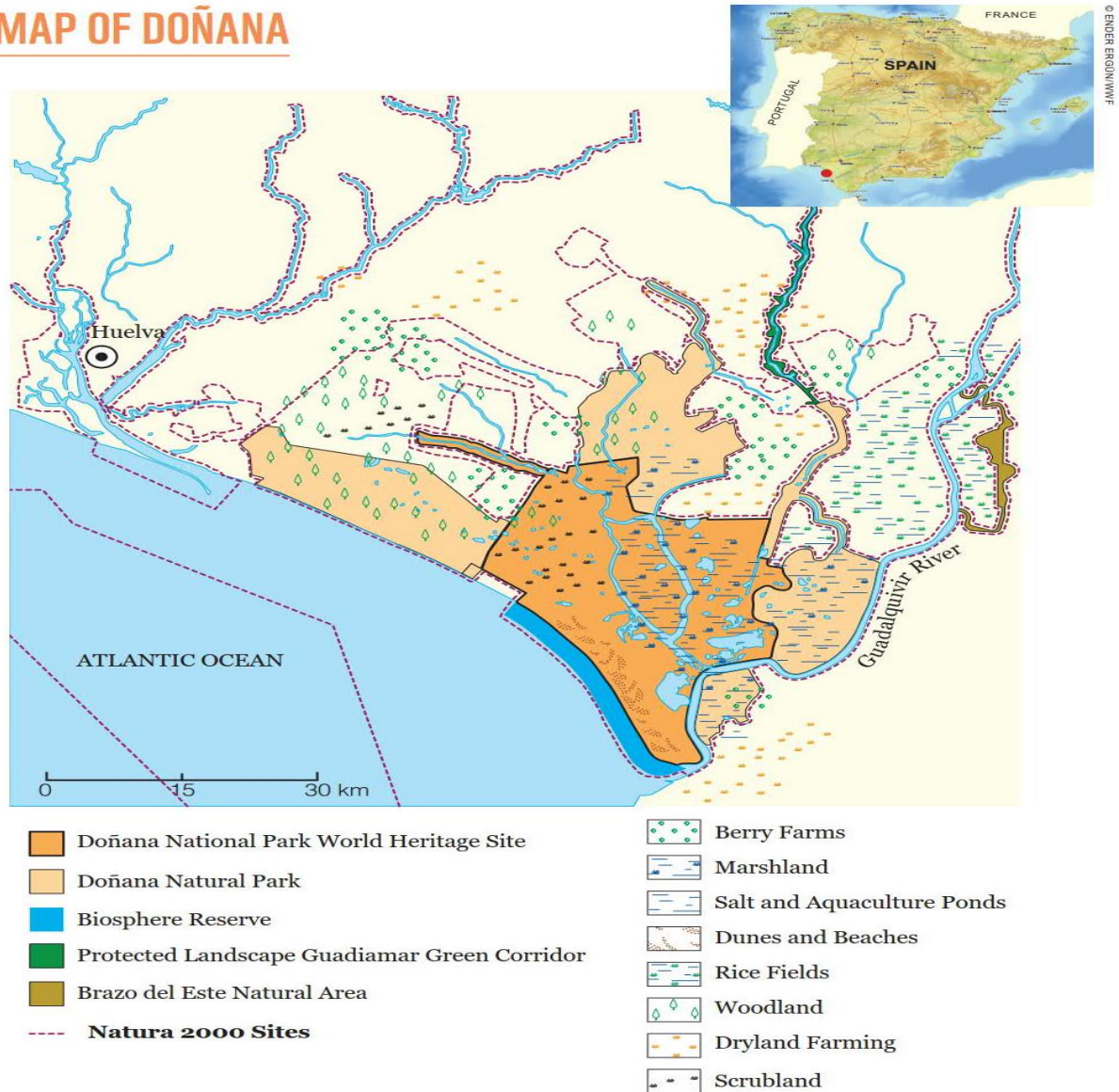
Intensive farming has been one of the main drivers of unsustainable water use from the aquifer. Growth of berry production in Doñana has put an increased strain on the quantity and quality of its water sources. It is estimated that about half of intensively farmed fields use water extracted from the aquifer without the necessary permits and licenses, and that 30 per cent of farms are using land illegally. This activity overexploits water sources and poses unfair competition to farms that respect the law. Spanish authorities have created a land use plan to address these problems, which would involve the closure of over 3,000 hectares of illegal farms. This plan was approved in December 2014 but has not been implemented.

Doñana's remaining water inputs are low quality and heavily polluted, which is causing widespread damage to the wetland. Pesticides and fertilizers are released that are contaminating the aquifer and surface water. This has led to an increase in phosphate and nitrate levels across the marshland. Changes to water inputs have reduced biodiversity, dried out lagoons, and resulted in negative changes to Doñana's natural value.

According to WWF over 80 per cent of the marsh has been lost since the beginning of the 20th century, along with 90 per cent of the shallow seasonal lakes. Lagoons that were temporary or seasonal have dried, and lagoons that were permanent – and critical for many plant and amphibian species during the dry season – are increasingly becoming temporary and rain-dependent.

Alteration of river-aquifer dynamics and a reduction in water inputs has resulted in the replacement of water-dependant plant species by drought-resistant plants. Also, there has been a decline in certain bird species that used to breed in Doñana. Further, seven out of ten species of dragonflies and damselflies listed on the IUCN Red List of Threatened Species have disappeared from Doñana.

## MAP OF DOÑANA



Source: WWF

Twenty years ago, an area near the wetland was damaged severely by an accident at the Aznalcóllar-Los Frailes mine. A dam holding waste from the extraction process burst and released five million cubic metres of toxic sludge and acidic water into the Guadamar River, which flowed downstream to the border of the park.

After the spill around 30,000 kilograms of dead fish were found. Efforts to clean up the spill took three years and cost around €380 million. The mine was reopened in 1999, but operated at a loss, and was closed in 2001, after receiving a subsidy from the government. In spite of this history, in February 2015, the Andalusian government awarded extraction permits to another mining company, which plans to reopen the mine. In addition to the threat that the mine poses from another accident, operations would result in further water extraction from Doñana's already depleted sources.

There are also proposals for gas extraction and storage projects inside Doñana's protected areas which would put their ecosystems at risk, and threaten the area's ability to provide a global carbon sink. Gas extraction can have negative impacts on the environment, including pollution of underground water, explosions in the case of leaks in gas storage facilities, and seismic reactions causing earthquakes.

The Spanish government has declared the area under Doñana a strategic gas storage site, and has authorised Spanish utilities company Gas Natural Fenosa to conduct a series of gas storage and extraction projects within the boundaries of Doñana's protected areas. A number of these projects have already had environmental impact assessments.

### **What should be done to save Doñana?**

The Doñana wetland has global ecological significance and supports the livelihoods and well-being of almost 200,000 people living nearby. However, Doñana has been degraded by inadequate water management and faces further damage from harmful industrial activities. The relevant Spanish authorities should adapt their current management practices and work with stakeholders to reverse the damage that has already been done in Doñana and protect it from future harmful activities.

The responsible local, regional or national authorities should ensure that environmental impact assessments consider the full cumulative environmental and social impacts of activities in Doñana and the surrounding areas. They should also assess the potential cumulative and synergistic impacts of conducting multiple activities, such as gas extraction, mining and dredging, that could impact negatively on Doñana.

Transitioning to sustainable agricultural practices combined with sustainable fisheries and tourism, would protect Doñana, provide stable income and jobs to local residents, and ensure that the region could maintain production for current and future generations. Local, regional and national authorities and stakeholders should work together to manage Doñana and the estuary area in a way that allows for restoration of the wetlands and its water sources, while supporting economic growth in the region.

The Spanish authorities should consider fully the recommendations made by the European Commission, the UNESCO World Heritage Committee, and the Spanish scientific commission. Of particular concern are the threats posed by excessive water extraction, dredging the Guadalquivir River, reopening the Aznalcóllar-Los Frailes mine, and permitting gas extraction in the Doñana complex.

The European Commission as well as the Spanish national and regional authorities should increase efforts with regard to enforcing and monitoring the correct implementation of EU and national law concerning Doñana.



## **Petitions concerning Doñana**

Over the years the Committee on Petitions of the European Parliament has received a considerable number of petitions alleging infringements of EU environmental legislation in Doñana, and petitioners have repeatedly asked the Parliament and the European Commission to intervene.

- As regards the petitions and complaints concerning the projects involving extraction, storage and transport of natural gas in Doñana, the European Commission in its latest notice to the Members of the Committee on Petitions stated that: *"it appears that the four projects for gas exploitation and storage at stake have been made subject to separate environmental impact assessments procedures pursuant to the provisions of the EIA and Habitats Directives. According to the conclusions of the respective assessments, none of the projects in question would adversely affect the integrity of the Natura 2000 sites concerned, either individually or in combination with the rest of the projects. Additional technical reports have been provided by the developer at the request of the competent authorities, in particular as regards the effects on the geology and the seismic risks. To date, only one of the four projects in question ("Marismas Occidental") has received final development consent from the Spanish authorities (granted in March 2016), in view of the conclusions of the assessment."*

The Commission further stated that: *"It also appears from the available information that the competent authorities and technical and research bodies that have been consulted in this case, including the Geological and Mining Institute of Spain, consider that the developer has provided, at this stage, sufficient information to comply with the relevant provisions of the EIA and Habitats Directives. This does not preclude, however, that more detailed studies may be required before the implementation of the projects starts."*

*Against this background, the Commission considers that it not possible to establish, from the available information, that the relevant provisions of the EIA and the Habitats Directives have not been correctly implemented in this case."*

The Commission's conclusion is that: *"In view of the information currently available and of the redress mechanisms available at national level, the Commission will not follow up these petitions any further."*

- As regards the petitions concerning the situation of the aquifers, the rivers and the general environmental situation in Doñana, the European Commission considered that: *"Spain had failed to comply with some of the requirements of the Water Framework Directive and the Habitats Directive by not adopting the necessary measures to protect and prevent the deterioration of the status of the groundwater bodies and to avoid deterioration of the groundwater-dependent habitats in the protected Natura 2000 sites in the Doñana area" and "the Commission decided to institute a formal infringement procedure and send a letter of*

*formal notice to Spain on 17 October 2014. The assessment of the reply submitted by the Spanish authorities confirmed that the shortcomings identified in the aforementioned Letter of Formal Notice still persisted."*

On 29 April 2016 the Commission decided to issue a reasoned opinion to which the Spanish authorities replied on 9 August 2016. In its latest Notice to Members the Commission informed that it was *"assessing the voluminous set of documents sent by Spain in connection with the assessment of the waterbodies and the measures included in the second cycle Guadalquivir River Basin Management Plan (for the period 2016-2021), and with the reports sent by the complainants in May 2017 alleging that the irrigation area around Doñana has continued to increase in the last years."*

Once this assessment is complete, the Commission will decide on the most suitable avenues to ensure the correct application of EU environmental legislation in this case.

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