

**Learning for Lakes Project:**  
Talaván Reservoir Case Study.



**Case 1**

**Title:** “Recovery of the natural heritage: environmental enhancement of the Talaván reservoir”.

**Location:** Spain

**Period:** 2009-2010

**Organizations and institutions:** Fundación Banco Santander, Fundación Global Nature, Junta de Extremadura (regional authority), local town councils and Confederación Hidrográfica del Tajo (watershed management authority).

**Budget:** 70,933.74 EUR

**Case 2**

**Title:** “Land stewardship for wetland restoration”

**Location:** Spain

**Period:** 2009-2010

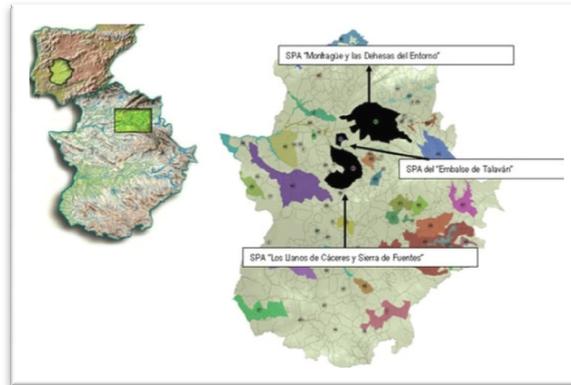
**Organizations and institutions:** Obra Social Caja Madrid, Fundación Global Nature, private estate owners.

**Budget:** 107,260.90 EUR

**Location and background. Value/importance.**

The region known as Cuatro Lugares, in the province of Cáceres (Spain), includes the towns of Talaván, Hinojal, Santiago del Campo and Monroy. It is a wide plain limiting to the north with the river Tajo and to the south with its tributary, the river Almonte. The population in this 438km<sup>2</sup> region is only 3,253 inhabitants, since it has been suffering for decades a high emigration to the cities.





The reservoir has an area of 39 ha and it was created by the construction of a dam in the stream Talaván in 1977 to provide water to the towns of the region. It is the habitat of a great diversity of waterfowl species and has a particular interest as a transition area (ecotone) between two different ecosystems: the holm oak savannas (dehesas) and the steppe plains. The whole region is a Special Protection Area (SPA), and it contains three habitat types included in the Habitat Directive and 22 taxons included in the Bird Directive. One of the most emblematic natural attractions of the site is the arrival of thousands of cranes (*Grus grus*) for the wintering season.



*Grus grus*

### Problems/issues and causes.

The lack of forested areas shaped a degraded landscape and entailed a lack of buffer zones that would protect the more sensitive areas in the wetland and a lack of shelter areas for certain animal species. The management of the surrounding private estates was in general poor, which contributed to the degradation of vegetation and of the existing small ponds formed by the accumulation of runoff water in depressed areas, which were used for livestock to drink and which were important for the conservation of biodiversity.





In addition, although thousands of visitors came every year to the site to enjoy bird watching or other recreational uses, the potential of the area as an attractive ecotourism zone, which would help local economy, was not fully developed, and there was a lack of infrastructure and conditions for a sustainable public use that didn't impair the environmental state of the ecosystem.

### Organizations and institutions involved

The Project for the environmental enhancement of the Talaván reservoir was promoted and financed by Fundación Banco Santander, and Fundación Global Nature (FGN) was the technical director. The regional and local authorities, as well as the watershed authority (Confederación Hidrográfica del Tago) collaborated in the project execution.

The land stewardship actions were jointly financed by Obra Social Caja Madrid and FGN, which was also in charge of its implementation.



### Actions taken:

#### Aforestation:

6000 trees and shrubs of different native species were planted in the area, forming disperse patches that would act as shelter and breeding zones for birds and mammals. Open spaces were left on purpose to allow anglers and visitors access to the banks. The plants were grown at a plant nursery that was created specifically for the project at an estate in the area owned by FGN, given the difficulty of finding the required species in the market.





Riparian vegetation was also planted along three streams that supply the reservoir (Talaván, Marivicente, and Cañada de Linares), with the aim of creating a buffer zone that reduces the amount of sediments getting to the river by decreasing erosion and absorbs part of the nutrient load coming from neighboring estates. This riparian vegetation also offers shelter for birds, mammals and also protected species of amphibians such as *Pelobates cultripes*, *Rana perezi* y *Hyla meridionalis*, included in the Anex IV of the Habitat Directive.

#### Installation of nesting islands:

Four nesting islands were installed in the reservoir to help waterfowl populations avoiding the risk of predation at their nests. These islands benefit many different species and families, from anatidae to limicoles.

To prevent them from eventually running aground, the islands were anchored to the bottom by chains linked to concrete blocks.



#### Creation of parking areas:

To prevent vehicles entering the more sensitive zones, a new 2,000 m<sup>2</sup> parking area was created at a less damaging location, close to a bird observatory. A line of shrubs was planted along the limits to reduce the noise and visual impact.





### Public use and awareness:

Environmental education campaigns were carried out with local school students with the purpose of showing them the values of the area, its flora and fauna, and the actions that were being taken. This campaign included guided tours to the reservoir, classroom activities, and a contest centered on the topic of the crane.



For visitors other ages, from local communities to tourists from other regions, 5,000 leaflets explaining the project and the values of the site were printed and distributed in town councils, cultural centers, hotels, institutions and other organizations in the region.

To inform local anglers about fishing practices that allow enjoying this activity without affecting wetland conservation, another leaflet was edited and 500 copies were distributed to the local Fishing Association and the town councils.

On the other hand, to improve the existing routes three new informative panels were installed. The first of them shows waterfowl diversity in the area, the second one focuses on the crane and its biology, and the last one explains the restoration actions that had been taken.

### Land stewardship: restoration and creation of small ponds

The project concerning land stewardship in the region of Cuatro Lugares established agreements with the owners of six private estates for the creation and restoration of 8 small ponds. The ponds were cleaned and enlarged, their natural aquatic vegetation was restored and their banks were also revegetated with native species. To protect the restored ponds from grazing, electric fences were installed around their area.





Further agreements with the owners of another 15 private estates were signed. The agreements entail joining the land stewardship network and hence adopting the commitment to carry out the conservation or restoration actions that the Fundación decides in the future.

### **Maintenance and monitoring**

Within the land stewardship project, a monitoring protocol was designed to evaluate whether the objectives established in the agreements were adequate for each specific location, whether the actions taken to pursue those objectives were the right ones, and finally whether those actions had been efficient and achieved the objectives.

The protocol defined a series of indicators that described the response of both parts of the agreement (the owner and the stewardship entity, FGN) to a certain action, as well as the results of the action. Different indicators were assigned to the different objectives. Some of those indicators include the number of new warrens and nests, the use of the restored ponds by targeted species, the number of restored or preserved elements (e.g. singular trees, traditional edifications, etc.), the appearance or area increase of priority habitats, water quality analyses, etc.

The project for the enhancement of the Talaván reservoir, on the other hand, did not include any monitoring or maintenance activities due to a lack of economic resources. However, a new project is being developed that includes a management strategy for the reservoir, which will help to evaluate the results of past actions and the current environmental state of the site.

### **Results and benefits.**

Although it is difficult to provide concrete data gathered at monitoring activities due to the short time that has passed since the finalization of the project, there are some results of the project's actions that can be expected. These include landscape improvement, vegetation recovery and benefits for local fauna, especially birds and mammals, which will have more shelter and breeding areas as a result of the



reforestation and the nesting islands, and they will be better protected from human intrusions thanks to the habilitation of the parking area that will reduce impact on the other areas.

Both projects are also expected to have an important positive effect on local economy, since the environmental enhancement makes the region more attractive for tourists and brings about more income for local restaurants, hotels and any other tourist facilities.



## References

[www.fundacionglobalnature.org](http://www.fundacionglobalnature.org)

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