



# LIFECHARCOS

## “Conservation of Temporary Ponds in Southwest Coast of Portugal”

LIFE12NAT/PT/000997

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### Interpretation Center of Temporary Ponds has already opened

The inauguration took place on May 21<sup>st</sup> and the Interpretation Center of Temporary Ponds in the Southwest Alentejo was soon explored by representatives of several local entities along with 3 classes of pre-school and primary school students from Odemira county. During the morning, the participants were accompanied by a team of biologists and technicians from the LIFE Charcos Project that uncovered the mysteries of this fascinating habitat.

On the following Sunday, May 27<sup>th</sup>, an Open Day was organized for the general population also with a guided tour by the Project team, marking the public opening of this space to be freely visited and for those who want to learn more about the Mediterranean Temporary Ponds, an priority habitat for conservation.



This Interpretation Center is installed in a complex of Temporary Ponds on the site of Pousadas Velhas, at north of Vila Nova de Milfontes and at the beginning of the road to Malhão Beach. The infrastructures make possible the visitation to be done autonomously through an accessible pedestrian trail to all, equipped with informative panels in order to help the visitors to interpret the habitat and the biodiversity associated to the habitat.

There is also a house that will support activities for raising awareness and environmental education that are planned for groups and schools that want to explore more about this habitat. However, prior appointment must be made with the Municipality of Odemira or LPN. It will be possible to participate in more practical activities for better understanding the dynamics of this habitat, such as the composition and structure of the soil as well as to know and identify the fauna and flora species associated with Temporary Ponds, among many others.

The Interpretation Center of Mediterranean Temporary Ponds of the Southwest Alentejo is one of the many actions that the LIFE Charcos Project did to promote the conservation, information and awareness of local communities such as farmers and visitors. Giving the importance of this habitat, the strategy was based on the concept “understand to value, value to protect” that seeks to reverse the misunderstanding about the Temporary Ponds.

Since its inauguration, the Interpretation Center has received more than 350 visitors, most of them students from various schools of different ages from Odemira county. The highlight so far is the visit that took place on World Environment Day, June 5<sup>th</sup>, where three classes of 3<sup>rd</sup> grade and two of 1<sup>st</sup> grade contributed actively to the conservation of this habitat by the improvement of the surrounding area of the Interpretation Center through the control of an invasive plant, the ice plant.



## Intervened ponds already have better conservation status

The interventions carried out by the Project team in the approximately 20 Temporary Ponds in the Southwest Coast of Portugal are beginning to give some positive signs and the state of conservation of these ponds is improving. Although the monitoring is in the final phase, preliminary results indicate higher floristic richness and an increase in the number of amphibian species and their abundance. Monitoring actions are based on a qualitative and quantitative assessment of various groups of living beings, in each pond, before and after the interventions on the ground.



### More fascinating flora

The data is still being processed for later verification of the flora component evolution but it is already possible to confirm that in general many of the Temporary Ponds that underwent in recovery interventions present a greater plant richness, including species typical of this precious habitat, when compared to the conservation status before the intervention.



This result was already expected because part of the interventions were directed to the replacement of the topography of ponds. Now, the intervened ponds present a more adequate topography, with better distribution and structuration of vegetation belts, which allows the species to recolonize their natural habitat, thus improving their conservation status.

There are about 248 species of plants associated with these ponds and 120 of them are bio indicators, ie biological indicators of the habitats 3170\* listed in the Habitat Directive. The diversity of plants in each pond complex can range from 13 to 72 species depending on their conservation status.

### More amphibians species with more individuals



Monitoring of amphibians in the intervening ponds was completed at the end of May of this year and 10 of the 13 known species in the Southwest Coast were detected, such as iberian ribbed newt, fire salamander, southern marbled newt, iberian painted frog, european toad, natterjack toad, water frog, iberian spadefoot toad, mediterranean tree frog, lusitanian parsley frog, being the last three species the most detected .

In general, the restoration and recovery of the ponds had a positive effect on the amphibian communities, not only an increase in the number of species, but also abundance when compared to the analysis before the interventions. There was also an increase in the number of species to reproduce within these intervened ponds.



### Bats and voles still under analysis

In the case of bats, monitoring was carried out through the placement of special recorders that record the sound frequencies that bats emit to orient themselves and a large number of records were collected thus still under analysis. Regarding the voles, especially for the two species sampled, the Cabrera' vole and the water vole, their frequency remains relatively low.

### Large Branchiopods Crustaceans have stable communities



Although the last year's rainfall regime was atypical which made the hydroperiod start rather late, that is in March instead of November as it is normal, the community of Large Branchiopods crustaceans are stable.



The only fact to note is that adult specimens of the species *Tanymastix stagnalis* were found in a Temporary Pond in Vila do Bispo county where cysts of this species had already been found in the sediment but never before had adult specimens been seen. In addition to *Triops vicentinus*, *Chirocephalus diaphanus* and *Branchipus cortesi*, which constitute the community of the Large Branchiopods in this particular pond, it is now possible to observe *Tanymastix stagnalis*.

## Virtual games help in environmental education

In the environmental education actions in schools, two virtual games were developed to complement the didactic materials produced by the LIFE Charcos Project. These games focus on habitat dynamics, talk about the biodiversity associated with them, and illustrate some of the threats they face.

To play these virtual games just go to the KIDS AREA in: [www.lifecharcos.pt/en](http://www.lifecharcos.pt/en)

## Farmers sensitized to preserve Temporary Ponds

Two briefing sessions were held for landowners and managers with the main objective of informing those present about the existence of Mediterranean Temporary Ponds on their land and discussing the best practices for the long-term conservation of this important habitat. The sessions were held on June 26<sup>th</sup> in Odemira and on July 10<sup>th</sup> in Vila do Bispo, bringing together around 30 participants. Also present were institutional representatives from the ICNF, the GNR-SEPNA, municipalities and some central and regional bodies of the Ministry of Agriculture.

The various topics covered in the sessions included the ecological value of Mediterranean Temporary Ponds, the biodiversity associated with them and their main threats as well as the results of the Project actions. Some guidelines were also mentioned on how to proceed with its proper management in order to maintain a favorable conservation status and a **Declaration of Principle** was presented with the purpose of requesting to the Ministry of Agriculture the creation of an agro-environmental support measure to protect long-term habitats. In a discussion space, the participants still had the opportunity to share some of their concerns and clarify some doubts. Working together with local actors to create strategies and find solutions that benefit all parties is essential to ensure the long-term conservation of this priority habitat.



@LPN



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## 8<sup>th</sup> Workshop of the European Pond Conservation Network was held in Spain



@ Erika Almeida



@ Margarida Cristo

During the 8<sup>th</sup> Workshop of the European Pond Conservation Network about 70 experts from 15 countries made more than 50 presentations in Torroella de Montgrí, Spain.

The LIFE Charcos Project was also present with the representation of the Prof. Margarida Cristo from the University of Algarve who gave an oral presentation entitled "LIFE Charcos: Temporary Ponds conservation in the Southwest Coast of Portugal" and presented a poster: "Genetic cleavage in the fairy shrimp *Tanymanax stagnalis* (L., 1758) in the Iberian Peninsula" and Erika Almeida from the University of Évora who presented the poster: "Grazing effects on Mediterranean Temporary Ponds". In addition, the workshop was followed by the Life Pletera Project seminar, including a session on coastal lagoon management and restoration.

In this workshop, the most up-to-date scientific knowledge was presented on crucial issues such as metapopulation theory, studies on the genetics of biodiversity associated with ponds, carbon flows, habitat management and restoration techniques and experiments, among others. This is the best way to share important information on pond management and conservation and update the general knowledge of all participants about the functioning of these fantastic habitats, contributing to successful restoration projects. In addition, the meeting also provided an excellent opportunity to networking and strengthen professional relationships among scientists, managers, students and environmentalists.

The organization of this event was made by University of Girona through the Research Group on Inland Water Ecology (GRECO) of the Institute of Aquatic Ecology with the support of the Mediterranean Museum and the Municipality of Torroella de Montgrí. The Workshop was held at the Mediterranean Museum.

**LIFE Charcos Project**

“Conservation of Temporary Ponds in the Southwest Coast of Portugal”

(LIFE12/NAT/PT/000997)

**Duration:** 01/07/2013 to 30/09/2018

**Coordinating Beneficiary:** LPN – Liga para a Protecção da Natureza

**Associated Beneficiaries:**

University of Évora, University of Algarve, Municipality of Odemira and Mira’s beneficiaries Association.

**Intervention Area:** Site of Community Importance of the Southwest Coast of Portugal.

**Opinion of José Pacheco,**

Resident in Odemira county and Guardian of Temporary Ponds



“I think it was a project, within what I know, well structured with the concern in research and conservation, also betting on the dissemination and awareness among owners, residents, students and the public in general”.

“I think raising awareness actions was the key for the survival of this ponds, making each of us a guardian”.

“I hope that projects of this kind continue to exist, mainly because there are many fragile ecosystems that can easily cease to exist due to human action. To disclose these natural sanctuaries without proper accompaniment and protection is enough to destroy them”.

“I enjoyed the activities in which I participated, mainly because they were accompanied by specialists, allowing me to know more in depth these unique ecosystems, which I did not know completely”.

“The LIFE Charcos team has always been available to answer questions and there has also been good support material. My favorite activity was a visit to a pond located near Vila do Bispo where I first saw a *Triops vicentinus*”.

“I think the stewardship network is a good initiative because it allows me to make a contribution to the preservation of these habitats, while at the same time I can follow the various stages of the pond formation process and the dynamics of the existing biodiversity. As I like nature photography, these habitats are a privileged place to photograph”.

“In post-life I hope that the conservation effort will continue, especially in this period of agricultural expansion along the coast that may jeopardize the preservation of these habitats and their unique species. They must keep up the effort of dissemination among the youngsters because they will be the future to protect these ecosystems”.

**Credits**

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