

Conservation of Temporary Ponds in the Southwest Coast of Portugal: state of the art

LIFE12/NAT/PT/000997

Margarida Cristo^a, Carla Pinto-Cruz^b, Rita Alcazar^c, Monteiro, J.P.^d

^aCCMAR, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, Portugal

^bICAAM - Instituto de Ciências Agrárias e Ambientais Mediterrânicas, Universidade de Évora, Núcleo da Mitra, Ap. 94, 7002-554 Évora, Portugal

^cLPN – Liga para a Proteção da Natureza, Centro de Educação Ambiental do Vale Gonçálinho (CEAVG), Ap. 84, 7780-909 Castro Verde, Portugal

^dCTA, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, Portugal

INTRODUCTION

LIFE Charcos: Temporary Ponds Conservation in the Southwest Coast of Portugal is an ongoing project starting in July 2013 to December 2017. This project was presented by Pinto-Cruz *et al* (2014) in the International Conference Wetlands 2014 in Huesca, and its main objective is the conservation and management of this sensitive priority habitat (3170*) - Mediterranean Temporary Ponds (MTP).

The intervention area is situated in the coastal plain of southwest Portugal which is classified under the Natura 2000 Network as Site of Community Importance (SCI Costa Sudoeste) and hosts a large number of temporary ponds, as a consequence of climatic and edaphic characteristics.

Traditionally seen as non-productive areas, MTP are nowadays subjected to strong anthropogenic pressures, such as deep soil turning, accelerated drainage, flattening the surface topography or transformation into permanent reservoirs for irrigation

Thus, the aim of the project is to enhance the MTP conservation status in SW Portugal.

RESULTS

The following outputs were already achieved:

- Updated cartography of temporary ponds in the Costa do Sudoeste SCI and a data base assembling all biological information available;

A total of 106 MTP (3170*) were classified in the area, with the registration of 248 characteristic plant species, 11 of which with protected status or with restricted distribution; 6 large branchiopods; 13 amphibians; 3 reptiles; 17 bat species, 2 of them under severe threat; and 2 mosses associated with this habitats. The Cartography presented in GIS is ready and was delivered to the main environmental authorities (ICNF and GNR-SEPNA).

- Acquisition of better knowledge on MTP hydrological and hydrogeological conceptualisation;

This objective is in evolution, with the identification of the existence of 3 different main conceptual models, and additionally, the first attempts to group the typical hydrochemical facies associated to of each of the hydrological and hydrogeological identified contexts (Salvador *et al.*, 2015).

- MTC conservation status assessment index;

- This objective was achieved with a recent published paper (Lumbreras *et al.*, 2016).
- Management guidelines for the conservation of each temporary pond or complex;
This is accomplished with the establishment of rules to be presented for 29 pond complexes that assemble the 106 ponds detected in the area.
 - Preservation in the long-term of at least 80% of the ponds plant species;
The plant seed bank is an ongoing process.
 - Sustainability demonstration of pond extensive grazing at 3 ponds, minimum;
One ongoing trial of grazing in a complex of 5 pools.
 - Pond connectivity promotion to decrease habitat fragmentation at 2 pond complexes;
Pond connectivity is established in 2 complexes: (1) with the creation of mini-ponds and shelters for amphibians; (2) with orientation corridors to cross under one road.
 - Functionality rehabilitation and conservation status improvement, of at least 4 MTP that are degraded:
 - 1 MTP was fully restored, with removal of invasive species in the surrounding area and regularization of the topography of the pond, preserving the first layers of soil.
 - 1 MTP was restored by the closing of the drainage ditch.
 - Rehabilitation of 5 ponds (1 complex) with one restoration action.
 - Restoration of 1 MTP for didactic purposes;
This action is ongoing with the agreement of the land owners.
 - Organization of a Pond Symposium;
Schedule for the 3 of May 2017, integrated in the EPCN conference (2 -4 May) and the SWS European meeting (4 May-6 May).
 - Raising awareness of general public, landowners and stakeholders;
Webpage in Portuguese and English.
2 formations for technicians, 3 awareness sessions for the general and more specialized public, 8 awareness activities for the general public.
69 presentations for students with field trips associated, 1000 students involved.

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