Water SCIs Project

Improving the conservation status of Species of Community Interest in the Upper-Apennine and Prato plain area

birdlife | Habitat Directive | water habitats | improving biodiversity | renaturalisation | preservation techniques | manage

PROJECT DESCRIPTION

The LIFE **Water SCIs** project had the general goal of improving the conservation status of certain animal species of Community Interest populating the aquatic environments (wetlands and water courses) within the upper-Apennine area and the plains surrounding Prato, which were exposed to different threats. The acronym chosen for the project refers to both the Species of Community Interest (SCI) and the fact that all the identified target species (fishes, crustaceans, amphibians and wetland birdlife) rely on water for all or part of their life cycle.

The project's area of application falls within the Province of Prato and Bologna, and extends to the plains surrounding Prato and the upper Tuscan-Emilian Apennines. Two areas were covered in particular:

- the wetland system within the plains, between the River Arno and the River Ombrone Pistoiese;
- some watercourses in the submontane and montane belts of the Tuscan-Emilian Apennines.

These areas, after the interventions of environmental requalification implemented by the Water SCIs project, were designated protected areas and included respectively in the SPA *Stagni della Piana Fiorentina* (IT5140011) and SCI *Laghi Suviana e Brasimone* (IT4050020).

The involved areas were exposed to different types of threats. Firstly, the fragmentation and reduction of wetlands, intensive agricultural activity, invasion of alien animal and plant species, hunting and fishing practices, inadequate management of fluvial and riparian vegetation as well as touristic use. The Project Water SCIs has responded to these threats by increasing the areas of wetlands, creating new habitats for endangered species, reducing the impact of certain infrastructures, promoting areas to SPAs and approving the expanded site management plan allowing the activation of conservation interventions. The target species involved in the project were, regarding the wetlands of the Prato plain, 15 bird species protected by the "Birds" Directive (79/409/EC) and the Italian crested newt (Triturus carnifex) included in Annex II of the "Habitats" Directive (92/43/EC); while in the Tuscan-Emilian Apennines' creeks the White-clawed crayfish (Austropotamobius pallipes) and the European Bullhead (Cottus gobio), both included in the Annex II of the "Habitats" directive.

PROJECT PHASES

During the preparatory phases a standard protocol was developed for the technical-scientific monitoring of the target species in order to evaluate their conservation status during the design cycle.

The envisaged practical conservation actions were:

- actions to protect the avifauna in the protected area of Cascine di Tavola with requalification and expansion of the Lake Bogaia and creation of microhabitats with characteristics suitable for the needs of the target amphibians and avifauna;
- remediation and environmental restoration of the Lake Pantanelle with the aim of introducing mechanisms to regulate the water flows; creation of microhabitats to suit the needs of the target amphibian and avifauna species; mitigation of road traffic impacts by shielding with a buffer zone realized through the planting of native trees and arboreous species;
- arrangement of the shores of the Ombrone and Bogaia lakes in favor of the target species. The design of the intervention in Lake Ombrone had as specific objective the protection and environmental rehabilitation of the northern portion of the wetland;
- improvement of the dispersion capacity of the target species through the realization of fish ladders;
- ex-situ breeding of Cottus gobio and Austropotamobius pallipes, in order to support the consolidation of the existing populations of the two species and improve their conservation status in the project areas. To this purpose a fish hatchery has been created, a prefabricated structure equipped with 6 resin glass tanks for the breeding of the target species fed by an ad hoc well;
- in-situ breeding of the target species by setting–up a procedure to favor the reproduction of Cottus gobio and Austropotamobius pallipes in their natural habitat. Planned improvements through the arrangement of natural substrates and the creation of artificial microhabitats in some river stretches in the project areas;
- testing of invasive alien species control methods in the areas of the Lakes Pantanelle, Bogaia and Ombrone.

PROJECT RESULTS

The Water SCIs Project has produced positive effects on the population of the target species of community interest, as demonstrated by the outcomes of the biological monitoring carried out. The interventions have efficiently restored the habitats suitable for their conservation and increased levels of biodiversity in the interested areas. Good results have been obtained also in containing the alien flora and fauna species.

The following achievements are to be highlighted:

- **creation** of a new Site of Community Importance *Appennino pratese* (SCI IT515003)
- **expansion** by around 574 ha of the Special Protection Area *Stagni della Piana Fiorentina e Pratese* (SPA IT5140011);
- requalification of three wetlands (Lakes Ombrone, Pantanelle and Bogaia) and the surrounding areas for the conservation of target bird and amphibian species, through the creation of specific micro-habitats and planting of arborous species;
- construction of **two fish ladders** with the aim of improving the dispersion capacity of the target species, in particular of the Cottus gobio. The intervention allowed to restore the fluvial continuity of two stretches of rivers in the Apennines (Trogola-Alto Bisenzio creek and Ceppeta brook)
- **94 detected bird species** (72 nearby Lake Pantanelle, 66 nearby Lake Ombrone and 40 nearby Lake Bogaia);
- containment of invasive alien species. Among the most significant achievements are to be mentioned the removal of **972** exemplars of Procambarus clarkii Girard from Lake Pantanelle and of **394** bamboo plants from the whole area;
- creation of a **fish hatchery** for the target species;
- productions of a big quantity of **juvenile seedlings.** The ex-situ breeding techniques allowed the birth and reemission in nature of **1443** juvenile exemplars of Cottus gobio. Regarding Austropotamobius pallipes, characterised by a very complex reproductive biology, the juvenile exemplars were **54**.
- approval of **Action Plans** for the conservation of Cottus gobio and Austropotamobius pallipes in the Apennine area;
- **drafting** of the **Natura 2000 Management plan** of the expanded SPA *Piana fiorentina e pratese* with the aim of ensuring a long-term commitment towards the conservation objectives, approved by Province Council Resolution n. 50/2012
- issuing of the publication "**Following the water course – LIFE Project Water SCIs for the conservation of Species of Community Interest in the Arno plain and on the Tuscan-Emilian Appenines**"
- commencement of the process of **integrated assessment of the Management Plan;**
- increased public awareness of the importance of the residual wetland areas of the plain around Prato and of the water courses in the high Apennines for the purposes of conservation of Species of Community Interest.

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Acronym
SCI d'acqua

Number of reference
LIFE07 NAT/IT/433

Reference Programme
LIFE

Beneficiary Coordinator
Provincia di Prato

EU contribution
574.268,00

Call Year
2007

Start Year
2009

End Year
2014

Beneficiary headquarters

Via B. Ricasoli, 25
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Italy

Region
Toscana

Description

Toscana, Emilia-Romagna, Provincia di Prato, Provincia di Bologna, Riserva Naturale Provinciale "Acquerino-Cantagallo", SIC IT5150003, ZPS IT5140011, SIC IT4050020, SIC IT5130009.