

# Improving the conservation status for the priority species and habitats in the Iron Gates wetlands

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## Introduction

Located in the south-western of Romania, ROSPA0026 Danube water course Bazias-Iron Gates overlaps a large area of priority habitats where core pygmy cormorant and ferruginous duck population lives alongside other protected species from Habitats Directive, 3 amphibians (*Bombina bombina*, *Bombina variegata*, *Bufo bufo*), 1 species belonging to the Reptilia (*Emys orbicularis*) and 4 species from Pisces (*Gymnocephalus schraetzer*, *Gymnocephalus baloni*, *Zingel streber*, *Zingel zingel*). ROSPA0026 Danube water course Bazias - Iron Gates is classified as the third important bird area from Romania.

The area represents an important stop point during the spring - autumn passage seasons for the wild birds, as it is on the flyway for the western part of the country Tisa-Mures-Danube. It is endangered with severe biodiversity threats, such as: wetlands eutrophication, aquatic invasive species, birds nesting and resting habitats degradation and wetlands pollution.

## Objectives

- Improve the conservation status of species of Community interest (vulnerable, endangered, rare and endemic species of European Union), especially pygmy cormorant (*Phalacrocorax pygmeus*) and ferruginous duck (*Aythya nyroca*), by restoring wintering, nesting and feeding habitats
- Improve the conservation status of priority habitats through demonstrative actions of removing aquatic and riverside invasive species
- Enforce a state of the art early warning system for invasive alien species in the ROSPA0026 Danube Watercourse Bazias-Iron Gates
- Increase public awareness on the importance of biodiversity in the NATURA 2000 ROSPA0026 Danube watercourse Bazias-Iron Gates

## Wetlands of Iron Gates Natural Park

### Habitats

Considering the number of species, ROSPA0026 Danube water course Bazias - Iron Gates is the 3<sup>rd</sup> wetland from the Romanian sector of the Danube, after the Danube Delta and Small Island of Braila. It includes 3 habitats of a communitarian interest:

- 3150 Natural eutrophic lake with *Magnopotamion* or *Hydrocharition* - type vegetation occupies the largest surface, about 3200 ha, which is 30% of the site surface.
- 92A0 *Salix alba* and *Populus alba* galleries - high importance for conservation. Identified on 80 ha between Bazias and Liuborajdea.
- 91E0\* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) - Gurile Nerei, Calinovat, Divici-Pojejena, Moldova Noua.

**Priority species:** Pygmy cormorant, *Phalacrocorax pygmeus* Pallas, 1773 & Ferruginous duck, *Aythya nyroca* Goldenstädt, 1770



## Actions and results

### Ecological restoration of wetlands

- We created resting platforms for pygmy cormorants. To increase the number of pygmy cormorant in area of project, 100 resting platforms were installed on Danube (a number of 7-12 cormorants can occupy one platform), especially in Gurile Nerei, Calinovat, Moldova Noua, Cozla, Liuborajdea.
- We installed live traps for eliminating *Neovison vison* in the areas used for feeding and resting by pygmy cormorant.
- Satellite tracking of 10 cormorants using PTTArgos systems. The movements of the cormorants are tracked and analyzed for the first time in this area. Collected data are providing information on cormorants' flyways, habitat use, threats, etc.
- Eliminating invasive trees species (*Robinia pseudoaccacia*, *Rhus hirta* and *Alnus altissima*) was realized by identifying growth areas, tree marking, cutting, extraction and transportation to warehouse areas. Furthermore, leaves and seeds were collected and burnt to reduce dissemination possibilities. The wood will be donated to schools located in the area of project.
- Enlarging riparian habitats area 91E0\* and 92A0. In order to enlarge the surface area of communitarian interest habitats in Gurile Nerei, Calinovat, Moldova Noua, Divici-Pojejena, Liuborajdea 55 ha were planted with *Salix alba*. After removal of invasive species, the trees will be planted following a plan designed by the beneficiary in 3 planting steps. (1<sup>st</sup> year planting, 2<sup>nd</sup> and 3<sup>rd</sup> year maintaining).



### Invasive species management

- In order to determine the weed harvesting safety area (limits, depths, bottom structure) we performed bathymetric mapping and hydrological characteristics of wetlands using high-performance cartographic methods, sub-metric GPS. The mapping actions were especially in Gurile Nerei, Calinovat Island, Divici, Pojejena, Moldova Noua, Liuborajdea, Cozla.
- Weed harvesting sessions in Calinovat, Divici, Pojejena, Susca, Moldova Noua, Liuborajdea. The activity was organized in 4 sessions in order to reduce the biomass to eliminate the aquatic invasive species. Also two sessions along Danube River were performed with Natura 2000 administrators and SPAs managers were trained in order to transfer the method to the areas where they work in.

### The Warning System on Aquatic Invasions (IAS - Invasive aquatic species) components:

- IAS assessment - Species, phenology, invasion magnitude, invasion ways
- Park administrators, wildlife managers and fishermen training
- Toolkit for invasive species identification
- Webpage for reporting invasive species.



### Geographic information system management

- Collecting environmental data to complete the wetlands database: (geology, hydrological parameters, cadaster plans, species distribution, ecotoxicity data, data on project success, concerned parts, conflict ranges, between local population and target species, feeding areas etc.)
  - Maintaining and updating the system during and after finalizing the LIFE project, producing maps available for interested parts (ex. fishing areas, suggested development plans, improving infrastructure, availability of food resources, scenarios and conservation measures needed).
- <http://portiledefier.ro/webgis/>

### Dissemination of Results & Information for local Communities

Besides the scientific dissemination an extensive public awareness campaign for project dissemination, a campaign for raising the public awareness on the birds and wetlands importance for tourists, stakeholders, local authorities, local citizens and children through printed materials, website, DVD, meetings and workshops contribute to the improvement of conservation status for the priority species and habitats in the Iron Gates wetlands



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