

**Foundation prize
„The Living Danube“
Application form 2024
(Application period 01.04.2023 – 31.08.2023)**

Proposer (if not identical with applicants)

Name	
Adress	
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E-Mail	

Applicant

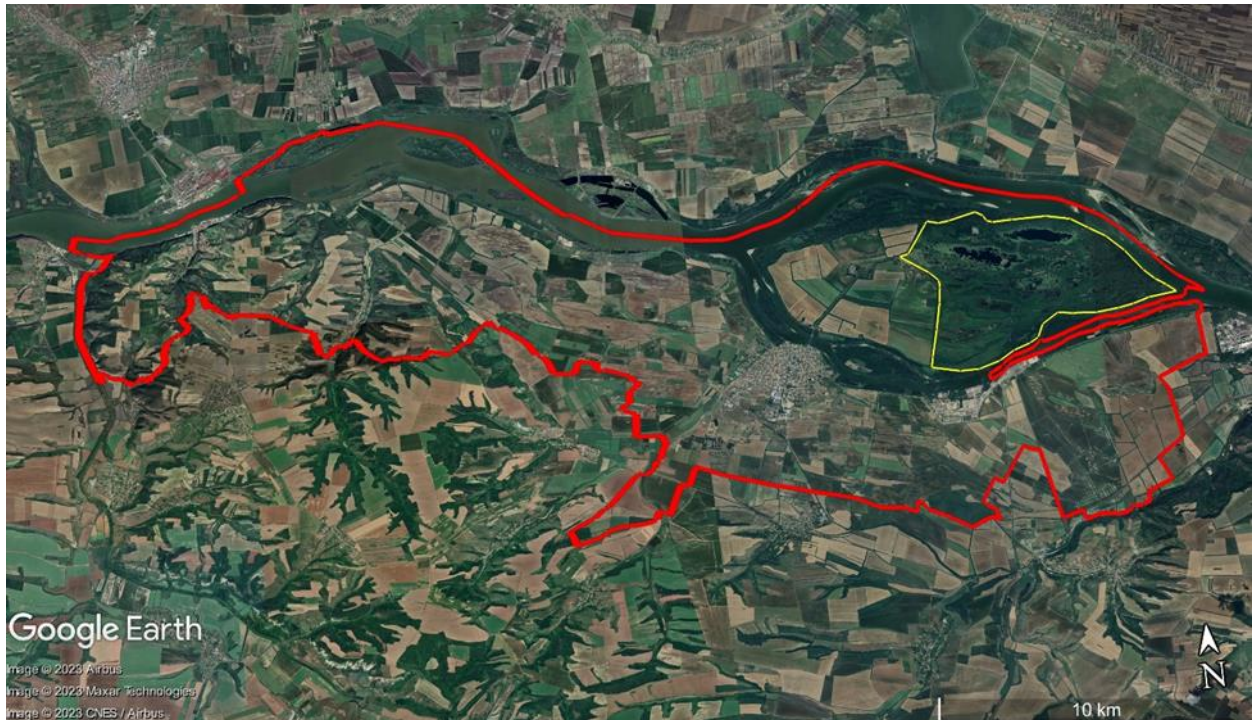
Institution/ responsible	Persina Nature Park Directorate
name of project	The wetlands restoration brings Danube habitats back to life and forms the Danube nature's treasures
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Summary of institution/of project/of applicant

(Please underline where applicable)

Persina Nature Park was established on 4 December 2000 with a total area of 21762,2 ha. It is located on the territory of three Danube municipalities: Nikopol, Belene and Svishtov, comprising the Danube section between kilometers 560 – 600 km. The park is **unique for Bulgaria, as the only one on the Bulgarian side located along the Danube.**

The protected area was designated to preserve and restore the Danube wetlands and protect the natural state of the numerous islands included in its territory. The park comprises two island groups - the Nikopol Island Group and the Belene Islands Complex.



Legend:

- A border of the territory of nature park
- Restored wetland on Persin Island

The map presenting the territory of Persina Nature Park/source Google Earth

The uniqueness and great importance of the **Belene Islands Complex** is the reason why it was designated as one of the national **Ramsar Sites of international importance under the Convention on Wetlands in 2002. With an area of 18 330 ha, it the largest Ramsar Site in Bulgaria today.** The complex represents a group of one large and several smaller islands on the Danube, located in a 16 km stretch of the river, between 560 and 576 km of the river with coordinates 43°40'N 25°11'E.



Photo credit: Alexander Ivanov/archive Persina Nature Park Directorate (PNPD archive)

Part of Belene Island Complex

The most important type of ecosystems in the park are floodplain forests and inland marshes. A number of protected areas have been designated for the protection of these habitats: the Kitka and Milka Reserves, category A (most natural) islands, in line with the WILDIsland initiative categorization - (<https://wildisland.danubeparks.org/wildisland-map/>), located on the islands with same names; “Persinski blata” Maintained Reserve, “Persin” Protected Area and “Persin Iztok” Protected Area, covering the eastern part of Persin Island; “Kaikusha” Protected Area - a marsh on the southern border of the park and “Plavala” Protected Area near the town of Nikopol.

When the Danube water level is low, sand banks of remarkable beauty and size form between the islands within the park. They are in themselves a habitat for a number of rare and key indicator species such as the Little Ringed Plover (*Charadrius dubius*), which needs such sand banks for nesting, or for endangered species such as the Dalmatian pelican (*Pelecanus crispus*) and the Pygmy cormorant (*Phalacrocorax pygmeus*), which rest there during autumn migrations and between feeding.

Today the island reserves within the Persina Nature Park represent a benchmark for wilderness, untouched by human activity entirely pristine islands.

The largest Bulgarian Danube Island, Persin, which gave the name to the Nature Park, is 15 km long and its width reaches 6 km. The Persin Island is the fourth largest island on the Danube and, thanks to the efforts of the “Persina” Nature Park Directorate, is home to the biggest successfully restored riparian wetland in Bulgaria.

A number of researchers and ornithologists call the "Persina" Nature Park the "small" Danube Delta because of the labyrinth of islands, inlets, side arms and channels between them, the concentration of birds and the high species diversity dependent on the living wetlands and their connection with the Danube.



Photo credit: Aleksandur Ivanov/ PNPB archive

Sand island close to Persin Island

The **preservation of the wetland and the maintenance of the flooding periods is carried out by the Persina Nature Park Directorate**, and is one of the **most responsible tasks** of the conservation experts in the park. There are numerous challenges which threaten the natural processes and functioning of the wetlands: draining, habitat changes due to human intervention, climate change, longer periods of low water levels in the Danube, intensive non-sustainable use of the riparian resources. All these constant issues make the **administration constantly look for flexible solutions to maintain and restore more and more wetlands** that have lost their active dynamic connection with the Danube over time. The Danube is a 'living river', it periodically overfills its bed and floods its adjacent areas, bringing them back to life. Their natural dynamics offer suitable habitat of hundreds of species whose existence depends on these periods of high water. When the water level is low, beautiful sand islands form in the river, forming small oases for nesting and migrating species.

Following the restoration measures and active management introduced by the Persina Nature Park Authority since the establishment of the park, the “Persina” wetland has become a completely revived site, **re-inhabited by two colonies of Dalmatian pelicans**, and since 2020 **Great and Pygmy Cormorants breeding colonies**, typical of the Danube islands, have also returned. A number of remarkable protected species, such as the Great Crested (*Podiceps cristatus*), Black-Necked (*Podiceps nigricollis*) and Red-Necked Grebes (*Podiceps grisegena*), Purple Heron (*Ardea purpurea*), Night Heron (*Nycticorax nycticorax*) and Squacco Heron (*Ardeola ralloides*), Pygmy Cormorant (*Phalacrocorax pygmeus*), Glossy Ibis (*Plegadis falcinellus*), White-tailed Eagle (*Haliaeetus albicilla*), Dalmatian Pelican (*Pelecanus crispus*), Eurasian Spoonbill (*Platalea leucorodia*) and many others are migrating and nesting in the area. Large flocks of White Pelicans rest on the island, although at present they do not nest anywhere on the territory of Bulgaria.

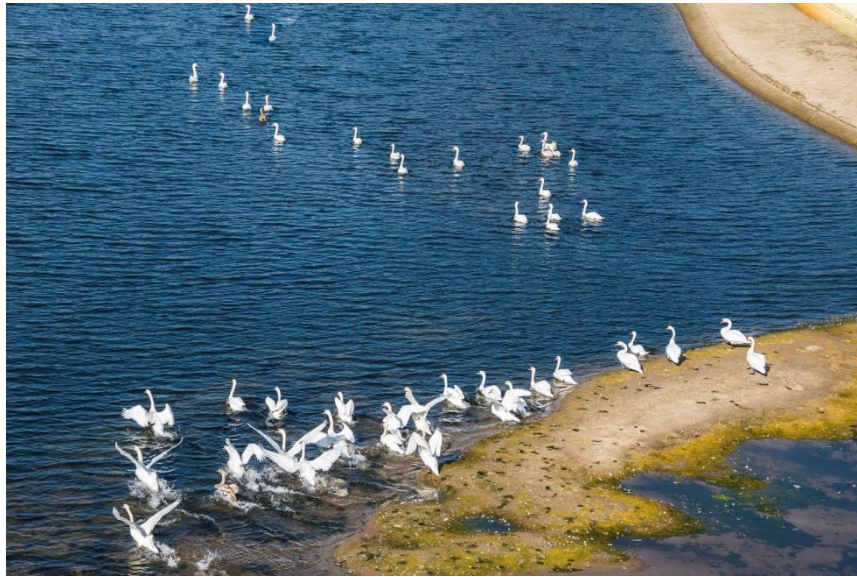


Photo credit: Aleksandur Ivanov/ PNPĐ archive

A flock of swans (Cignus olor), resting on sand banks

Following an ambitious and large-scale wetland restoration concept Persina Nature Park has managed and successfully implemented more than 18 environmental projects. All of them are related to wetland restoration, conservation, and many activities for species recovery. In order to achieve its objectives, the Directorate of Persina Nature Park cooperates with many Bulgarian and international partners (NGOs and environmental organizations working together with the park administration). As a result, the largest wetland in Bulgaria along the Danube has been restored. The successful international and cross-sector cooperation has helped the Nature Park Directorate and set the stage for new plans for future projects to prevent biodiversity loss. Many species have returned to their successfully restored habitats.

In its attempts to strengthen international cooperation, collect additional experience, ideas and develop best-practices, Persina Nature Park Directorate is one of the founders of the DANUBEPARKS Association, established as international institution, as a result of many years successful cooperation in Danubeparks network (2007, Declaration of Tulcea, Romania). The Association represents a platform for coordinated and extensive collaboration among the various administrations of the Danube Protected Areas, bringing together national and nature parks, biosphere and nature reserves from nearly all the Danube countries, including Romania, Moldova, Bulgaria, Serbia, Croatia, Hungary, Slovakia, Austria, and Germany.

The mission of the DANUBEPARKS Association is to preserve, develop and restore the Danube River, its main tributaries, and surrounding wetlands. As a cohesive ecosystem, it should be an inspiring lifeline for all the inhabitants of this European macroregion. Today it brings together representatives of 21 national parks, biosphere reserves and nature parks (www.danubeparks.org), together with Persina Nature Park.

As a part of the DANUBEPARKS, the Persina Nature Park is also one of the founders of the WILDIsland concept for establishing a Danube wild island habitat corridor and promoting river dynamics as the key driver for undisturbed nature.

The concept was inspired by the fact that ecological corridors are functional passages and stepping-stones that connect isolated natural areas and serve a group of species dependent on similar environment. Thus, a corridor connects different populations and allows species to migrate between them. Furthermore, the need for ecological connectivity is becoming more apparent due to the effects of climate change.

The idea grew from an initial survey and mapping of these unique and biodiversity-rich habitats into a large-scale international project LIFE WILDisland (NAT/AT/000063) for their long-term preservation, launched in 2022. The Persina Nature Park is among the 15 partners working jointly in a unique cross-sector cooperation between nature conservation authorities, hydropower, navigation and forestry to protect and revitalize the last near-natural "wild" islands on the Danube.

The Danube WILDisland habitat corridor comprises:
3 000 kilometres of the river
912 islands
138 000 ha of dynamic island habitats
147 pristine natural islands
13 840 ha of wilderness

With its past and current actions and restoration projects, the Persina Nature Park has become a key player, trusted partner and role model in preserving the unique habitats and species of the Danube, developing best-practice and state-of-art conservation measures.

Detailed description

- **background, max. 1500 character**
- **target (concept, project design, methods), max. 2500 character**
- **implementation (extent of implementation, next steps) max. 2500 character**
- **attachments: up to three files with max. 3MB per file, in German or English ... language. Use this option to provide us with additional information and mediato your project (e.g. specialized publications, reports, sources / references).**

- **Background**

In the past... Until 1970, the Persin Island was home to the largest mixed colony of Herons, Ibises, Spoonbills and Cormorants along the Bulgarian section of the Danube, numbering over 7,000 breeding birds. It provided one of the last remaining breeding sites of the globally threatened Dalmatian Pelican (*Pelecanus crispus*).

Before the restoration of the wetland on Persin Island..... However, with the construction of dykes on the periphery of the island and the drainage system and after the construction of the Iron Gates Hydro Power Plant and dam upstream in Serbia, the colony gradually declined and disappeared.

In the year of 2000 ... In the period 2002-2008, the [Wetland Restoration and Pollution Reduction Project](#) (WWRRP) was implemented.

The global environmental objective of the project was to create a model for reducing trans-boundary nutrient loads in the Danube and the Black Sea basins and to preserve biodiversity in the protected sites.

Persina Nature Park was selected as one of the target project sites due to the high value of its biodiversity, the capacity of restored wetland to extract biogenic pollutants and their role for flood prevention. At that time, the territory of Persina Nature Park was already a part of the initiative "The Danube River Downstream – a Green Corridor", which started in June 2000, with the objective to structure a network of completely functioning wetlands along the Danube River in Romania, Bulgaria, Moldova and Ukraine and the WWRRP project offered one extra step towards its goals.

The project assisted Bulgaria to meet its international commitments to the Strategic Partnership for reduction of nutrient pollution in the Danube and Black Sea basins and the relevant requirements of the Convention for Protection of the Danube, the Convention for Protection of the Black Sea, etc.

It was supported by the "Danube/Black Sea Strategic Partnership" Investment Fund for the Reduction of Biogenic Pollution of the Global Environment Facility (GEF) and was designed in line with the Strategic Action Plan for the Protection and Restoration of the Black Sea and the "Danube/Black Sea" Strategic Partnership. The practical wetland restoration was funded by a grant from the Global Environment Facility (GEF) and World Bank, also co-financed by the Government of Bulgaria and Ministry of environment and water.

It resulted in the physical restoration of a wetland of 2,280 hectares that had been drained over the past century. is the newly restored area is located within the "Persinski blata" Mintained Reserve, protected by the Protected Areas Act of Bulgaria and is included in two sites of the European Ecological Network Natura 2000: the "Persina" SPA - BG0000396 and the "Belenski Islands Complex" SPA BG0002017.

The project implementation started just a year after the *establishment of the administration of the Persina Nature Park in 2001*.

- **Target (concept, project design, methods)**

How the process works.... restoration itself was carried out according to a pre-selected scenario corresponding to the most natural way of flooding of the Danube floodplains as a result of natural morphological and hydrological processes. The water from the Danube was allowed to enter areas that were previously marshes. This was made possible by the construction of sluices, canals, protective dykes and drainage channels, through which controlled flooding could take place. The restored wetland began to fulfil its natural functions, retaining water and nutrients, contributing to the recovery of biodiversity, fish populations, amphibians, reptiles, birds and other species as early as 2008 with the first entrance of water on the island.

To restore the Persin Island wetland, **three gates were constructed** and initially operated mechanically with direct human intervention.

Water flows into the wetland using gravity, i.e., when the water level of the Danube is high, the connecting structures (sluices) are open and fresh water flows into the wetland.

The management of the Persin Island Wetland is entirely carried out by the Persina Nature Park Directorate.

Following the really promising initial results, in 2019, WWF Bulgaria funded the **automation of one of the facilities** through a grant of the International Coca Cola Company. After that, the opening and closing of the gate has been done by hydraulics, the process is fully automated and can be controlled remotely.

In 2023, the work of the Persina Nature Park Directorate continued with an **upgrade and mechanization of the remaining two facilities** with funding provided by the Operational Programme Environment 2014-2020. In the same year, an **automated water level monitoring system** was established to help monitor and manage processes in a precise and timely manner.

After the restoration of the wetland. Nowadays....

Following all the conservation measures and active management of the administration of the Nature Park, the process of habitat restoration has been long and is currently still ongoing, the changes in wetland conditions are gradual and have led to the establishment of **new water bodies, creation of different microhabitats and increase in species richness and abundance**.



Photo credit: Persina Nature Park Directorate

The nesting platforms of Dalmatian pelicans in Peschina marsh, Persina NP

As a result of the extremely efficient restoration measures, implemented by the nature park administration in the years, the mixed breeding colony of Great and Pygmy Cormorants was formed again on Persin Island. Its expansion was observed in 2022 by the experts of the Persina Nature Park Administration. Nowadays, **over 230 bird species** can be observed in the newly-restored wetland and almost all have high conservation status, such as: Eurasian Spoonbill (*Platalea leucorodia*), Glossy Ibis (*Plegadis falcinellus*), Great-Crested Grebe (*Podiceps cristatus*), Black-Necked Grebe (*Podiceps nigricollis*), Red-Necked Grebe (*Podiceps grisegena*), Black Stork (*Ciconia nigra*), Purple Heron (*Ardea purpurea*), Grey Heron (*Ardea cinerea*), Ferruginous Duck (*Aythya nyroca*), White-tailed Eagle (*Haliaeetus albicilla*), Dalmatian pelican (*Pelecanus crispus*), Pygmy Cormorant (*Microcarbo pygmeus*) and many more.

The most common **fish species** in the wetland are: Danube carp (*Cyprinus carpio*), Silver bream (*Carassius gibelio*), Northern pike (*Esox lucius*), Common bleak (*Alburnus alburnus*), Common bream (*Abramis brama*), European perch (*Perca fluviatilis*), Weatherfish (*Misgurnus fossilis*).

8 species of amphibians, with the most typical representatives: March frog (*Pelophylax ridibundus*), Edible frog (*Pelophylax esculentus*), Eastern spadefoot (*Pelobates syriacus*), European fire-bellied toad (*Bombina bombina*), Common toad (*Bufo bufo*) and European tree frog (*Hyla orientalis*). **The endemic Danube-crested newt (*Triturus cristatus dobrogicus*) is also found only here.**

Among **reptiles**, the most widespread are Grass snake (*Natrix natrix*), Dice snake (*Natrix tessellata*), Meadow lizard (*Darevskia praticola*) and European pond turtle (*Emys orbicularis*).

Of the **mammals** inhabiting these biotopes, the Bern Convention Annex II Eurasian otter (*Lutra lutra*) should be listed. Other characteristic mammals include various rodents, Roe deer (*Capreolus capreolus*), European polecat (*Mustela putorius*), Fox (*Vulpes vulpes*), Wildcat (*Felis sylvestrus*). The wild boar (*Sus scrofa*) impresses with its numerous population.

All this diversity of species is linked to and dependent on the presence of wetlands that provide their habitat and security for their future survival. **Wetland restoration gives this lost-in-time piece of wildlife a chance to revive and recover. The efforts of the directorate of the Persina NP, the main goals and activities of the administration from that moment until today, are**

focused on overcoming the challenges of climate change and the subsequent results of human activity. Annual monitoring and management of water levels on Persin Island are part of the administration's objectives. **The successfully restored wetland is already yielding results and is an example of good practice in conserving and protecting the richest ecosystems on the planet.** It opens up more and new opportunities for the conservation of species that have found their place in the living conditions of the Lower Danube.

It serves as an excellent example for best practice in **the restoration of the endangered species**, which have lost their nesting place due to river alterations and human pressure.

- **implementation (extent of implementation, next steps)**

*A few years after the restoration of the island wetland, the Dalmatian Pelican (*Pelecanus crispus*) returned as a breeding species in Persina Nature Park.*

In Bulgaria, the globally endangered Dalmatian Pelican (*Pelecanus crispus*) was recorded as breeding only in the Srebarna Biosphere Reserve, located 392 km downstream Persina Nature Park. After the restoration of the wetland on Persin Island, the conditions there have considerably improved and many of the species that were extinct in the past have started to show interest and return as permanent nesters. Among these species is the Dalmatian Pelican.

Already in 2011, the Park Administration, during regular monitoring activities, reported Dalmatian pelicans aggregating in the wetland during breeding season.



Photo credit: Persina Nature Park Directorate

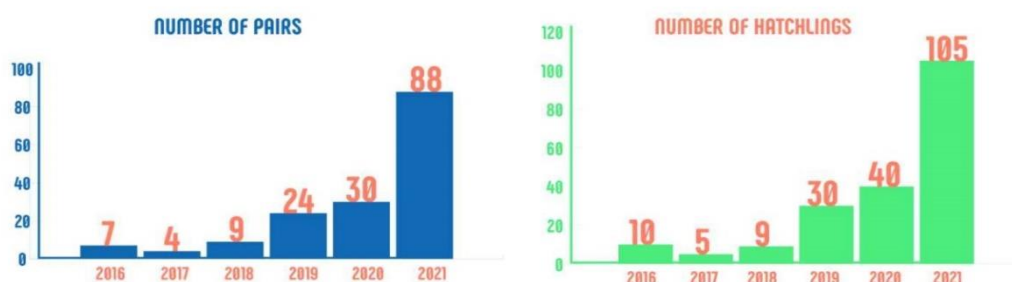
*The first nesting of the Dalmatian pelican 2016 (*Pelecanus crispus*)*

In 2011, with the help of various NGOs, the experts of Persina Nature Park built the first wooden platform to attract and assist the nesting of the Dalmatian pelican with an approximate area of 32 square meters in one of the marshes in the wetland. The platform was very quickly accepted by the birds, which started to use it for resting and roosting, but did not initially nest on it.

A number of years passed in which the park administration carefully observed the ongoing process and the behaviour of the birds. Every year, the condition of the platform was checked, since at times it accommodated more than 250 individuals of Dalmatian (*Pelecanus crispus*) and White Pelicans (*Pelecanus onocrotalus*). The platform is reconstructed whenever necessary and new reeds are laid on it before each nesting season, to assist the birds to recognise it as a safe and suitable nesting site.

In 2016, five years after the construction of the first platform, the first breeding pairs of Dalmatian Pelicans were recorded on the territory of Persina Nature Park. The first chicks hatched and fledged, turning the colony into a living, active breeding place.

CONSERVATION OF THE DALMATIAN PELICAN IN NP "PERSINA"



Pile platforms are wooden constructs, covered with reed sheaves. They have been built in the marshes of Persina island and provide optimum breeding conditions to the Dalmatian pelicans.



Graphic credits: Svilen Cheshmedzhiev

Data on breeding pairs and hatched chicks according to BSPB data collected for Directorate of the "Persina" NP

The colony has been growing ever since, gradually occupying all the wooden platforms offered.

At present, in 2023, Dalmatian Pelican is successfully breeding in two of the marshes on Persin Island, nesting on three wooden platforms (2 platforms covering an area of 32 m², and one of 64 m²). The platforms are also using for roosting during roaming and migration, concentrating some 200 individuals of Dalmatian and White Pelicans, while only Dalmatian Pelicans are currently breeding there.

The platforms are periodically monitored by the experts in the Park Directorate and ornithologists from Bulgarian Society of Protection of Birds/BirdLife Bulgaria.

Today, we can proudly say that **through state-of-art wetland restoration and species conservation measures, the territory of Persina Nature Park is the second restored nesting site of the globally threatened species of Dalmatian pelican.** This incredible success of Persina NP administration is a **significant and decisive contribution for the survival of the entire species on the Balkans and along the Danube.** The creation of suitable breeding conditions for pelicans in different locations in Bulgaria gives the birds a much better chance to overcome critical moments impacting their survival, connects sub-populations, increases the breeding stock and improves the resilience of the species to climate and other habitat changes.

The recovery data and overall conservation success are summarized in the scientific paper "Artificial nesting platforms support population recovery of the Dalmatian pelican *Pelecanus crispus* along the Danube River in Bulgaria", S. Cheshmedzhiev, E. Todorov, V. Koev, S. Mihov & Y. Kutzarov / Conservation Evidence Journal (2022) 19, 15-20 (<https://doi.org/10.52201/CEJ19/MLCN1701>)

Next steps

Today the Persina Nature Park Directorate still holds the responsibility to overcome the everyday challenges and protect the richness and integrity of the restored wetland, to maintain the optimal habitat of Dalmatian Pelican and eliminate threats, in line with the purpose of the designation of the Nature Park.

The future conservation measures required to achieve that are as follows:

- Wetland conservation measures: precise and automated management of irrigation gates to ensure adequate near-nature hydrological regime and water dynamic for the wetland. Efficient species conservation measures.
- Platform maintenance: the artificial Pelican nesting platforms need annual reconstruction and maintenance. All three platforms need major repairs this year, as they are constructed of timber and deteriorate quickly in high humidity conditions. Laying reeds on the platforms, carried out within volunteer camps is done during the fall-winter period when the pelicans roam and are not in the vicinity of the colony.
- Wetland restoration: restoring other wetlands lost because of past human activity. Restore the water regime of the Kaikusha marsh, the southernmost point and the last remaining wetland in the Svishtov-Belene lowland, in order to turn into yet another oasis for many waterfowl, amphibians, reptiles and mammals.
- WILDIsland Habitat corridor: preservation of the natural state of the islands within the Persina NP through adequate conservation and non-intervention management.
- Ensuring natural river dynamics: protect the water regime of the wetlands and the natural floodplain processes characteristic of the Danube. Preserving river dynamics and maintaining the river as a living ecosystem.

The wetlands restoration, carried out by the Persina Nature Park Directorate brings habitats of the Danube back to life and preserves the last remaining Danube nature's treasures of European and global conservation importance.

All these targeted efforts, carried out by the Persina Nature Park Directorate in close cooperation with national and international partners and institutions will preserve the Danube River as a living natural biological corridor.

Sources/references:

1. [Wetland Restoration and Pollution Reduction Project \(WWRRP\)](https://projects.worldbank.org/en/projects-operations/project-detail/P068858) (<https://projects.worldbank.org/en/projects-operations/project-detail/P068858>)
2. Danube Wildislands map <https://wildisland.danubeparks.org/wildisland-map/>
3. Artificial nesting platforms support population recovery of the Dalmatian pelican *Pelecanus crispus* along the Danube River in Bulgaria", S. Cheshmedzhiev, E. Todorov, V. Koev, S. Mihov & Y. Kutzarov / Conservation Evidence Journal (2022) 19, 15-20 (<https://doi.org/10.52201/CEJ19/MLCN1701>)

4. Persina Nature Park Directorate official web site, www.persina.bg
5. DANUBEPARKS Network of protected areas official web site, www.danubeparks.org
6. <https://danubeparks.org/downloads> DANUBEPARKS The Network of protected areas official web site, DANUBEPARKS Declarations of Tulcea, Danubeparks Declaration of Viena, Statement on the establishment of Danubeparks, Statutes of Danubeparks Association



Recoverable Signature

X Stela Bozhinova

Stela Bozhinova

Director

Signed by: Stela Bozhinova Lazarova

Belene/ Bulgaria 15.09.2023

Signature, stamp if necessary