

# **Environmental Impact Assessment (EIA)**

Prepared by the Association for ecology and tourism ECOTOURISM-2016, Ohrid

for the **Critical Ecosystem Partnership Fund**

August 2020

**Subject to EIA:** Placement of wooden ecotourism facilities in the Belchishta wetland area

**Project:** Preserving Belchishta Wetland, North Macedonia, through Engagement with Municipality and Local Stakeholders

## **1. Policy, legal, and administrative framework**

Belchishta Wetland is part of the Catchment Management Zone - Lake Ohrid catchment. (KBA: MKD10). It is one of the largest surviving water habitats of this kind in North Macedonia, covering a surface of approximately 137 hectares with flooding forests and humid habitats.

Management of the Belchishta Wetland is still very sectoral and does not recognise the multiple functions of wetland. Furthermore, existing experiences on sustainable wetland management in the Municipality of Debrtsa are not generally available or used by key stakeholders. There is only 1 official in the Municipality dealing with local tourism and economy and there is no sector for environmental issues. Planning for land and resource use in this wetland is limited and furthermore plans are seldom put into practise. Coordination of the activities taking place on the ground in the wetland is exceedingly difficult and the skills for undertaking wetland management are insufficient. The knowledge base about wetland resources, status and key management problems is limited and no proper policy guidance is in place.

The statutory laws that generally apply to the Belchishta Wetland include, but are not limited to: the Constitution; the Environmental Protection Law, the Law on Nature; the Law on Water; the Forestry Law; the Fisheries Law; the Penal Law; and their implementing decrees. The implementing decrees for most of these laws establish detailed rules that apply to specific uses of natural resources.

The wetland in 1999 was nominated as CORINE biotop within Macedonia. In addition, it is part of the European EMERALD network, which consists of areas of special interest for conservation and in 2017 was identified by the Ministry of Environment as a potential NATURA 2000 site for future research. In the past there was an initiative to protect this area raised by nongovernmental organizations and local authorities (*National Biodiversity Strategy and Action Plan for the period 2018-2023*). Primary goal of protection included swamp and marsh ecosystems (especially 31-hectares alder forest). However, up to now Belchishta Wetland is not protected site.

## 2. Project Description

The project will be implemented in the Belchishta Wetland, located in the Municipality of Debrtsa between the villages Novo Selo and Belchista, about 18,5 km north of Lake Ohrid, Republic of North Macedonia. (Figure 1). This wetland is recognized in the CEPF ecosystem profile as Key Biodiversity Area as a part of the Catchment Management Zone - Lake Ohrid catchment. KBA: MKD10.

The dominant habitat types within the borders of the wetland are Mediterranean swamp alder woods (55%), Common club rush beds, Common galingale beds, Small reed beds of fast-flowing waters and Sub-Mediterranean humid meadows (35%) of the total surface of the locality. Beside that one, there are some other plant species with highly area-restricted distribution in the other parts of North Macedonia.

Relevant habitats according to EU-Habitats Directive:

- 3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation
- 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
- 6540 Submediterranean meadows with *Molinio-Hordeion secalini*
- 7230 Alkaline fens
- 91EO Alluvial forests with *Alnus glutinosa* (L.) Gaertn. and *Fraxinus excelsior* L. (forest alliances Alno-Padion, Alnion incanae, Salicion albae)
- 9280 *Quercus frainetto* woods

The project actions include the following:

- Charter establishing a platform for strengthening of the cooperation between relevant stakeholders in collaborating in project activities, protection and promotion of the Belchishta Wetland
- Baseline assessments of the status and conservation, in-situ and ex-situ measures for the most important Belchishta Wetland's fauna and flora species
- Preparatory work for a new protected area
- Development and implementation of trainings, info-days and "School for volunteers monitoring"
- Placement of wooden ecotourism facilities to provide a platform for promoting ecotourism development
- Promotional activities and project visibility

The purpose of this study is to assess the environmental impact of the placement of wooden ecotourism facilities in the wetland area as the following:

- one bird observation tower,

- three wooden gazebos and
- three way-marking and interpretive signs

This project activity seeks to enhance the Belchishta Wetland which has significant nature conservation and landscape values, whilst providing for the further promotion and diversification of the tourism sector. It is also intended to facilitate tourist and educational access to this ecologically significant area by providing well designed and managed nature-based ecotourism facilities that are sympathetic to the natural environment.

The ecotourism facilities will have the following functions:

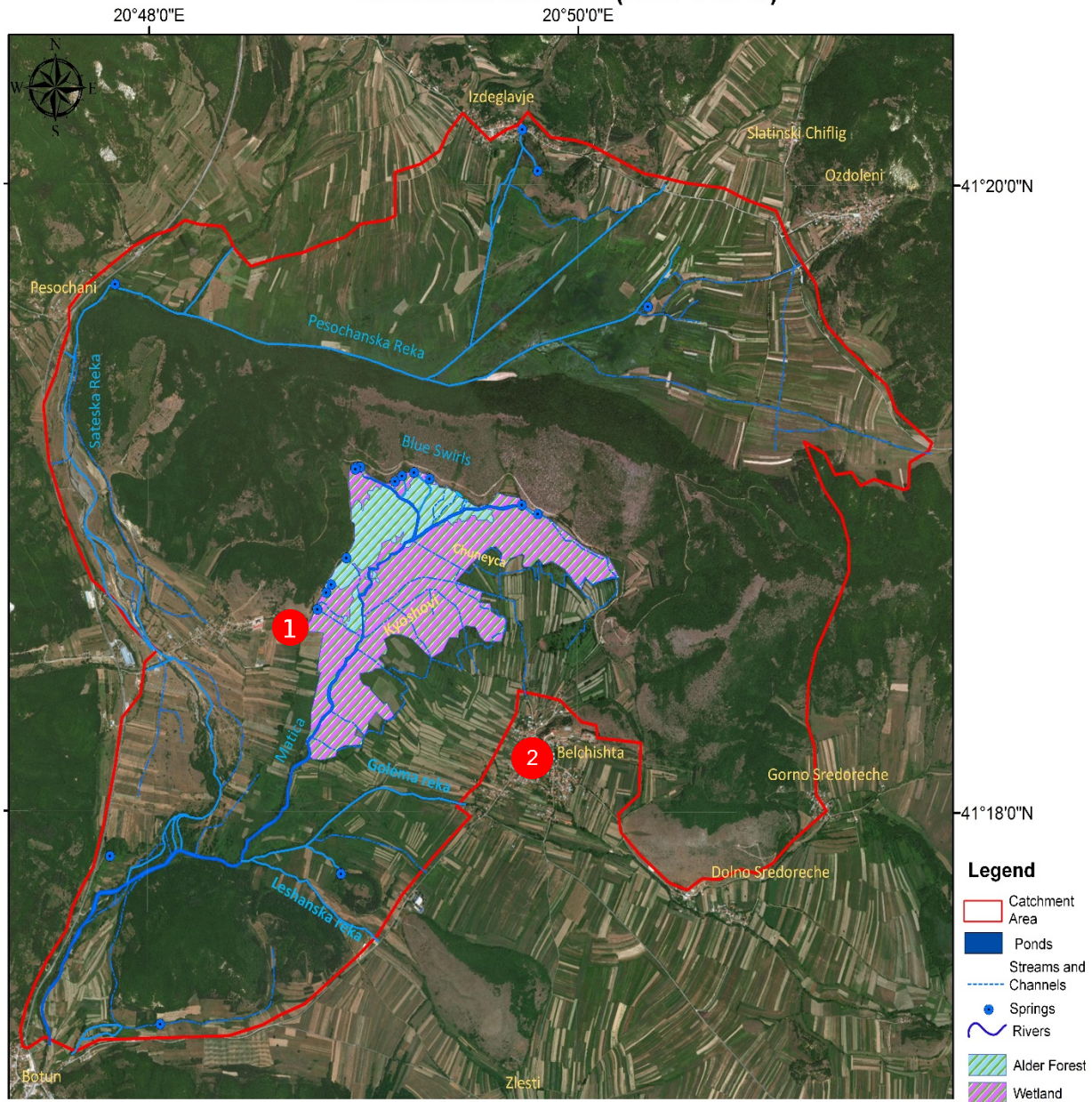
- a) an educational focus which includes the promotion of Belchishta's Wetland environmental awareness;
- b) promotion of local community involvement;
- c) support for conservation activity;
- d) a nature-based focus

They will be built during 2020 (September – December) and 2021 (January) and will be constructed of mostly local natural materials. "Ecotourism2016" will provide the design of the facilities and each can take up to one week to construct and place at the locations planned.

The specific locations of the facilities are already determined. "Ecotourism2016" consulted with both the experts in flora and fauna and the Municipality of Debrtsa representatives to determine the most appropriate location in accordance with law.

The bird observation tower, one wooden gazebo and one way marking interpretive sign will be placed at the south west edge of the wetland, nearby Novo Selo village. Two wooden gazebos and two interpretive signs will be placed in the village Belchista, nearby the Museum on Belchishta Wetland which is under construction. (*Figure 2*). Given field visit with local municipal authorities and consultation with experts, the locations will not impact any site of environmental or cultural importance.

# Belchishta Wetland (Blue Swirls)



Belchishta Wetlands, taken satellite image from May  
Projected Coordinate System: WGS 84 UTM Zone 34N  
Projection: Transverse Mercator

Geographic Coordinate System: GCS WGS 84  
Datum: D WGS 84

- 1 Location of the bird observation tower, one wooden gazebo and one way marking interpretive sign
- 2 Location of the two wooden gazebos and two way-marking interpretive signs

**Figure 1.** Map of the Belchishta Wetland area with locations of the ecotourism facilities

“Ecotourism2016” will hire a relevant firm who will do the construction of the facilities. The materials used to construct the facilities are limited to wood and polymer modified bituminous roofing material.

Two wooden gazebos will be 2,5 m in length, 2,5 m in width and 2,65 m in height (*Figure 2*), while one gazebo will be 3,5 m in length, 2,5 m in width and 2,65 m in height, accommodated in the Museum’s yard. The signs will be with rectangular shape, with 2,6 m height and width of 1 m. An example illustrating the design is provided in *Figure 3* and the exact locations in *Figure 4* and *5*.



**Figure 2.** – Illustration of 2 wooden gazebos and way-marking interpretive signs



The bird observation tower will be rectangular building: 2,5m x 2,5 m length and width and 5,5 meters high. (*Figure 3*)

**Figure 3.** Bird observation tower

The building steps will include the following:

- Site preparation: removing all debris, roots, grass and rocks, leveling/re-grading the areas with adding some processed gravel or washed stone to the sites
- Building the base: digging holes for the posts, anchoring posts with quick-setting concrete
- Mounting bracing and top beams
- Building the roof
- Adding finishing touches: painting with protective varnish to protect the wood from the rain, wind and harsh sunlight



**Figure 4.** A view to the location Nr 1



**Figure 5.** A view to the location Nr 2

### **3. Baseline data**

The Belchishta wetland area is a very complex mosaic of habitats, some of them modified to some extent by human activities. The locations in which the wooden ecotourism facilities (one bird observation tower, one gazebo and one way-marking interpretative sign) are to be constructed are not known to contain any vulnerable, threatened or endangered species of plants or animals. The small areas where the facilities will be situated is not known to contain significant habitat or breeding areas of any vulnerable, threatened or endangered species of animals. The rest of the facilities: two gazebos and 2 signs will be situated in built-up low populated rural area.

Since gazebos, bird observation tower and information signs are not considered permanent outdoor structures, we do not need a building permit. Before the start of the works, we will sign an Agreement for permanent transfer of equipment with the local Municipality of Debrtsa.

### **4. Environmental Impacts**

We do not anticipate any significant changes in the local ecology or species composition as a result of the construction and use of the wooden ecotourism facilities. A small area 3 m x 3 m will be cleared for one wooden gazebo, the same area for the bird observation tower and 3 m<sup>2</sup> for three way-marking interpretive signs. Thus, the total cleared area will amount 21 m<sup>2</sup>. Two out of three gazebos will be situated in paved areas without clearing and leveling activities. It is expected that the area cleared will regenerate naturally following the dismantlement of the enclosure following the completion of its use. The building materials and colours will be complementary to the natural site conditions and building design will be sympathetic to the landscape character of the local area.

There will be not any disturbance to the wetland substrate during the construction nor any changes in the water flow regime.

## **5. Analysis of alternatives**

We consider the current design of the wooden ecotourism facilities as the most suitable for the intended need and with the least amount of environmental disturbance. The locations were chosen with consultation with the local municipality and the experts for flora and fauna hired in our project.

## **6. Environmental monitoring and mitigation plan**

### **6.1.1. Mitigation**

“Ecotourism2016” will supervise the construction of the wooden ecotourism facilities to ensure that the agreed design of the facilities is followed and that all waste materials, likely to be strips of roofing material and emptied varnish package, are disposed off appropriately in waste disposal areas in the Ohrid Municipality area, as there is no disposal site for such type of waste in the Municipality of Debrsta. Further to this Ecotourism2016” will monitor and supervise the: dust produced by ground works, noise and vibration (machinery and personnel), soil pollution (spilt fuel/oils) to ensure no unnecessary disturbance to either the wetland environment or species.

### **6.1.2. Monitoring**

“Ecotourism2016” staff will conduct monitoring at least one time per month to assess the condition of the wooden ecotourism facilities and noting any adverse conditions that could affect the environment in the wetland. Any issues will be reported to the Municipality of Debrtsa and resolution shall be discussed with the relevant municipal authorities.

## **7. Implementation Schedule**

The wooden ecotourism facilities will be constructed within the period September 2020 – January 2021.

## **8. Complaint Mechanism**

Any complaint regarding the environmental impact of the ecotourism infrastructures can be raised following the same process as outlined in the Process Framework for Restriction of Access to Natural Resources, implemented by Ecotourism2016 under the same project.

### *Contributors*

This EIA was prepared by Goce Kolevski, Project coordinator and Gjoko Zoroski, Project officer at “Ecotourism2016”.

*References* : Reports form the project “Improving the management and sustainable use of the Belchishko Blato (Sini Viroi)” (2018-2019); (<https://euprojects.mk/maps/report/662>)



