

## Natural Protected Areas of the Danube

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**Abstract:** The paper aims at highlighting the new attitude of the Danube riparian states, expressed by the signing of the Convention adopted in Sofia on June 29, 1994. For the first time, the riparian states have shown interest other than that related to the navigation regime, taxes and tariffs, respectively protection and sustainable use of the Danube. In this context, Romania has been preoccupied and it is still preoccupied with ensuring the protection of the environment in the Danubian basin on our territory. In accordance with European and international regulations, natural areas protected by a different regime of protection, conservation and use according to national, international, community, county or local interest categories have been established by internal normative acts in accordance with European and international regulations. They consist of scientific reserves, national parks, nature monuments, nature reserves, natural parks, biosphere reserves, etc. Of these, we have selected the *Danube Delta Biosphere Reserve*, the *Balta Mica a Brailei Natural Park* and the *Iron Gates Natural Park*.

**Keywords:** environmental protection; Danubian area; Balta Mica a Brailei Natural Park

### 1. Introduction

Until the *Convention on Cooperation for the Protection and Sustainable Use of the Danube River (Convention for the Protection of the Danube River)*, signed in Sofia on 29 June 1994, the previous treaties and conventions on the Danube concerned only the regime of navigation, maintenance and maintenance of the river fairway in certain sectors, the setting of fees and tariffs and their level.

For the first time, the Sofia Convention is concerned, as the name implies, with the protection and sustainable use of the river for the benefit of all riparian. In fact, the convention is the work of the ten states whose territories are crossed by the Danube, called by the respective legal act *Danubian states*<sup>2</sup>, to which the European Community is added.

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<sup>2</sup> Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine.

The firm desire of the contracting parties is to intensify their collaboration on the protection and use of water, to remove some risks and threats with adverse effects on the environment, the economies and welfare of the Danubian states<sup>1</sup>.

In other words, the signatory states have undertaken to take all measures to protect the environment in the Danube basin area. The reasons for such engagement are multiple, taking into account the position of the river in the European context, the economic potential and the risks that can affect the ecological balance in the area.

Thus, the Danube is the second largest river of Europe in length (2,857 km) and flow (about 5,600 m<sup>3</sup>/sec at the entrance to Romania). Ensures a direct connection of the Black Sea with Central Europe and Asia. It is a link to the ten riparian countries and not only.

From an economic point of view, the Danube affirms its importance as part of the Pan-European Corridor VII of the European Union. It is an important waterway linking Central Asia and Western Europe via the Rhine-Main-Danube Chanel.

The Danubian area is also distinguished by its cultural, ethnic, linguistic and religious diversity, which for centuries has been preserved in an original manner and has to be further protected. All these are solid grounds for the Danubian states to cooperate to protect this diverse and rich environment, the true treasure of universal civilization.

In order to achieve this major objective, Romania has established, among other measures, natural protected areas in the Danube basin, among which the *Danube Delta Biosphere Reserve*, *the Insula Mica a Brailei Natural Park* and *the Iron Gates Natural Park*.

## **2. General Considerations on the Natural Protected Areas**

According to provisions of art 2 point 6 of G.E.O. no. 195/2005 on the protection of the environment<sup>2</sup> *“the protected natural area is a terrestrial, aquatic and / or underground area, with the established legal perimeter and having a special regime of protection and conservation, where there are species of wild plants and animals, biogeographic elements and formations, landscape, geological, paleontological, speleological or otherwise, of particular ecological, scientific or cultural value.”*

The definition is reiterated in the provisions of art. 4 point 18 of G.E.O. no. 57/2007 on the regime of natural protected areas, conservation of natural habitats, wild flora

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<sup>1</sup> The Convention defines the notion of *Danubian States* in art. 1 lit a) as the sovereign states which own a considerable part of the river basin of the Danube. By considerable part is meant a quota exceeding 2 000 km<sup>2</sup> of the total catchment area.

<sup>2</sup> Published in the Official Monitor no. 1.196/30.12.2005.

and fauna<sup>1</sup>. This text also provides that the protected natural area is “a terrestrial and/or aquatic area in which there are species of wild plants and animals, biogeographical, landscape, geological, paleontological, and speleological or other species, ecological, scientific and special cultural heritage, which has a special protection and conservation regime established in accordance with the legal provisions.”

From the definition formulated by the two normative acts it follows that a terrestrial, aquatic or underground area, in order to be declared a *protected natural area*, must constitute the habitat of some species<sup>2</sup> of wild plants and animals, contain biogeographical, landscape, geological, paleontological, speleological elements and formations or otherwise, provided that these elements are of particular ecological, scientific or cultural value.

By adding these features, a special protection and conservation regime will be given to that area by statutory provisions.

Also, by normative provisions (Article 5 paragraph (1) of G.E.O. 57/2007) the categories of protected natural areas were established as follows:

- a) *of national interest*: scientific reservations, national parks, nature monuments, nature reserves, natural parks;
- b) *of international interest*: natural sites<sup>3</sup> of universal natural heritage, geoparks, wetlands of international importance<sup>4</sup>, biosphere reserves;
- c) *of community interest or “Natura 2000” sites*<sup>5</sup>: sites of community importance, special areas of conservation<sup>6</sup>, avifauna special protection areas;
- d) *of county or local interest*: established only on the public or private domain of the administrative-territorial units.

The legal regime of protected natural areas is regulated in Annex 1 of G.E.O. no. 57/2007.

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<sup>1</sup> Published in the Official Monitor no. 442/29.06.2007.

<sup>2</sup> The habitat of some species is the environment defined by abiotic and biotic factors in which a species resides at any stage of the biological cycle (Article 4 (6) of G.E.O 57/2007).

<sup>3</sup> The site is a geographically defined area, exactly delineated (art. 4 pct. 10 din G.E.O. no 57/2007).

<sup>4</sup> Wetlands of international importance are stretches of steep or flowing waters, marshes, peat bogs, ponds or marine litter that do not exceed a maximum depth of six meters as the habitat of the poultry (according to the Ramsar Convention signed on 2 February 1971 at Ramsar, in Iran; February 2 was set as “World Wetlands Day”).

<sup>5</sup> Natura 2000 is an ecological network of protected areas aiming at preserving the most important types of habitats and species in Europe

<sup>6</sup> Special areas of conservation - site of community importance designated by a statutory, administrative and / or contractual act in which conservation measures are applied for maintenance or restoration to a conservation status favorable to natural habitats and/or populations of species of community interest for which the site is designated (Article 4, point 12 of GEO No. 57/2007).

On the territory of Romania, the Danube river flows through areas that contain all forms of relief (mountain, plateaus, plains), where there is a great diversity of biological, landscape and cultural elements of great value. Due to these conditions, protected areas were established in the immediate vicinity of the river, the most important being the Danube Delta Biosphere Reserve, *the Insula Mica a Brailei Natural Park and the Iron Gates Natural Park*. Other smaller ones, some of them included in the already mentioned ones: Lower Meadow of Inferior Prut River Natural Park, Măcin Mountains National Park, Comana Natural Park, Mehedinți Mountains Geopark, Domogled National Park - Cerna Valley, Cheile Nerei-Beușnița National Park, Semenic – Cheile Carausului National Park. It is worth mentioning that out of the 28 main protected areas on the territory of Romania, 11 are located in the Danube area. Also, 68 of the 273 sites of community importance, 60 of the 108 special bird protection areas and 162 scientific reserves and natural monuments are also located in the Danube area.

As can be easily observed, Romania has given and paid particular attention to protecting and preserving the environment in the Danubian area, complying with the provisions of the Convention for the Protection of the Danube River by fulfilling its obligations.

### **3. Danube Delta Biosphere Reserve**

The Danube Delta entered UNESCO World Heritage in 1991, being classified as a national reserve biosphere reserve protected under the Ramsar Convention.

By Law no. 82/1993 on the establishment of the Danube Delta Biosphere Reserve<sup>1</sup>, with its subsequent amendments and completions, it has been established that it is an area of national and international ecological importance comprising the following physical and geographic units: Danube Delta, Murighiol-Plopu Salts, Razelm-Sinoe Lagoon Complex, Marine Danube up to Cotul Pisicii, Isaccea-Tulcea sector with floodplain area, Black Sea coast from Chilia Arm to Cape Midia, inland sea and territorial sea, up to 20 m fathom line<sup>2</sup> (Article 1 of Law No 82/1993).

The reservation is subject to the *protected natural area* regime in accordance with the provisions of G.E.O. no. 57/2007 and falls under the following management categories: biosphere reserve, wetland of international importance, natural and universal heritage site and Natura 2000 site.

The following areas with differentiated ecological protection were delineated within the reservation:

- a) strictly protected areas, having the conservation status of the scientific reserves;

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<sup>1</sup> Published in the Official Monitor no.283/07.12.1993.

<sup>2</sup> Fathom line – line that links, on a map, the points with the same depth towards a reference area.

- b) buffer areas, which have strictly protected areas protection role and where limited use of available resources is admitted, according to the approved management plans;
- c) areas of sustainable development, where economic capitalization is permitted through traditional practices or by new, environmentally acceptable technologies;
- d) ecological reconstruction areas, where only measures for restoration of the damaged environment are made, subsequently becoming areas of sustainable development or strictly protected areas.

The delimitation of these areas is done through the management plan, in accordance with the provisions of the law.

Reserve's management is carried out by the Administration of the Danube Delta Biosphere Reserve. It is a public institution with legal personality, financed by the state budget and subordinated to the central public authority for environmental protection. The administration is headed by a governor with the rank of Undersecretary of State. He is helped by the Executive College, made up of heads of departments of the administration.

In addition to the administration, there is an Administrative Advisory Council composed of representatives of institutions, economic organizations, non-governmental organizations, local authorities and communities that own in any way land, property or interest in the area of the reservation and who are involved and interested in applying protection, conservation measures and sustainable development of the area. As the name implies, this body has an advisory role in taking decisions that may affect the interests of its representatives and in the preparation and adoption of the reserve's management plan.

Also within the administration there is a Scientific Council made up of scientists and specialists with experience in the ecological, economic, sociological, cultural field on the Danube Delta issue, as well as the wetlands and the protected natural areas. The nomination of the members of the Scientific Council is made by the Administration of the Reserve, with the approval of the Romanian Academy and approved by the central public authority for environmental protection.

The development of all activities in the reserve is governed by the Reserve's Management Plan, the Reserve's Regulation and the Danube Delta Territory Planning Plan. The right of the local population in the reserve to preserve local specific customs and traditional economic activities is guaranteed. The State grants compensation, in accordance with the law, in case of restriction or cessation of traditional economic activities imposed by restrictive protection and conservation measures.

Terrestrial and aquatic areas, including permanently under water land, existing within the Reserve's perimeter, together with the natural resources they generate, constitute a natural heritage, a public domain of national interest.

There are exceptions to this rule:

- a) lands within the perimeter of the reserve, which, according to the law, are private property of natural and legal persons;
- b) lands within the perimeter of the reserve which are public or private property of the administrative-territorial units;
- c) the lands within the perimeter of the reserve occupied by agricultural and fishery facilities which are a public domain of county interest and are administered by the Tulcea County Council;
- d) State-owned public land owned by other central or local public authorities or institutions, together with the natural resources it generates;
- e) natural resources that are managed by other central public authorities, according to the law.

Natural or legal persons operating within the perimeter of the reservation are obliged to use only the accepted environmental means, both traditional and new, by the regulations of the administration. The access of natural persons to the perimeter of the reservation for tourism and recreational – sportive purposes, except for the local people, shall be made after the payment of the established tariffs, based on the permit issued by the administration. The fee for issuing a permit for access to the reserve also includes the visitors' contribution to the sanitation costs of the public domain of national interest.

The development of economic, productive, recreational and leisure activities by natural or legal persons on the territory of the reserve is authorized by the competent local public authorities according to the law and by the central public authority for regional development and tourism *based on the environmental authorization issued by the Reserve's Administration.*

Areas strictly protected from the Danube Delta Biosphere Reserve are the following: Roșca-Buhaiova, Letea, Răducu, Nebunu, Vătăfu-Lunguleț, Caraorman, Murighiol, Erinciuc, Popina, Sahalin-Zătoane, Periteasca- Bisericuța-Portița, Doloșmanului, Istria-Sinoe, Grindul Chituc and Rotundu.

The other components of the reservation are buffer areas, sustainable development areas and ecological reconstruction areas.

#### **4. Balta Mică a Brăilei Natural Park**

The natural park is a protected natural area with the role of protecting and conserving landscape assemblages where the interaction of human activities with nature over time has created a distinct area with significant landscape and cultural value, often with a great biological diversity. The management of these parks aims at maintaining

the harmonious interaction of man with nature by protecting the diversity of habitats and landscapes, preserving the traditional use of land, encouraging and strengthening the traditional activities, practitioners and culture of the local population.

Natural parks are part of the V IUCN (International Union for Nature Conservation) category – “Protected Landscape”<sup>1</sup>. Consequently, natural parks offer recreation and tourism opportunities to the public and, through their establishment, encourage scientific and educational activities.

Such an area is the *Balta Mică a Brăilei Natural Park*, declared as such by Law no. 5/2000 regarding the approval of the National Territory Planning Plan - Section III - Protected Areas.<sup>2</sup>

The park is located in the SE part of Braila County, occupying areas from the administrative areas of Bertestii de Jos, Chiscani, Gropeni, Mărășu, Stăncuța and Tichilești. It covers an area of 24,555 ha of floodplain of the Lower Danube, between the Insula Mare a Brăilei and Bărăganul de Nord (Brăila’s Plain, geomorphologic subunit of the Romanian Plain). The Balta Mică a Brăilei is a wet area with a rich flora and fauna range both as species and as terrestrial and aquatic ecosystems.

The first attempts to introduce measures for the protection and preservation of the area date back to 1978, when the time authorities established measures to rationalize the natural reserves located in the Insula Mică a Brăilei, being called Zoological reserve. A decision of the former People's Council of Braila County (No. 11/29.09.1979) referred to the same area as the *Insula Mică a Brăilei* where environmental protection measures were applied. Other provisions of the same administration were followed by which the *Insula Mică a Brăilei* was declared a natural reserve, then a protected area, a mixed botanical and zoological reserve.

In Annex 1 to the Law no. 5/2000, chap. II point 13.1 - Reserves of the biosphere and national or natural parks, at R is the *Balta Mică a Brăilei* as a natural park.

The Park is managed by the Park Administration, supported in its work by a Advisory Management Board and a Scientific Council. Management is based on a management plan. According to this plan, several projects have been carried out, mainly aimed at removing the specific threats of such areas, protecting and preserving the environment, and restoring degraded elements over time (e.g. - restoring the former alluvial forests and of the natural hydrological regime).

Currently, actions are taken to implement communication and ecotourism strategies, to develop a tourism infrastructure and to raise awareness about protected natural areas.

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<sup>1</sup> Protected area, mainly managed for landscape conservation and recreation (Annex I, lit. e) to G.E.O. no. 57/2007).

<sup>2</sup> Published in the Official Monitor no.152/12.04.2000.

## **5. Iron Gates Natural Park**

The Iron Gates Natural Park is a protected natural area of the 5<sup>th</sup> IUCN category located in the administrative territories of Caraş-Severin and Mehedinţi Counties. This geographic area is known as the *Danube Gorge* (the longest gorge in Europe) or the *Clisura Dunării* and was declared a natural park by Law no. 5/2000, with an area of 115,665.8 ha. It is, from this point of view, the second natural protected area in Romania after the Danube Delta Biosphere Reserve. It consists of 18 reservations. The predominant relief is represented by the mountains, respectively the southern extensions of the Banat Mountains, the Mehedinţi Mountains and part of the Mehedinţi Plateau.

Among the natural reserves in the park's composition we can mention: Vărănic Hill, Cracul Găioarei, Gura Văii-Vârciorova, Cazanele Mari and Cazanele Micii, Ostrov-Moldova Veche Wetland, Valea Polevii Water Cave, Diverse Valley Râpa cu lăstuni, Balta Nera-Danube and so on.

The activities taking place in the area are set out in the Management Plan of the Iron Gates Natural Park, an official document approved by Government Decision. The management plan promotes a stable framework for integrating conservation of natural and cultural environment protection issues with those that aim at the social-economic development of the area and is a tool for dialogue between institutions that manage natural and human resources in this area.

The purpose of the management plan is to promote a management model that allows the sustainable development of human communities and the preservation of the landscape, biological diversity and other values of the natural and cultural environment. The management plan aims to integrate the objectives of preserving and protecting natural resources within the concerns of local institutions and authorities, promoting common views and ongoing collaboration.

The construction of the dam at Gura Văii, in partnership with Yugoslavia between 1964 and 1974, has produced significant mutations in the natural and human ecosystems. Behind this dam was built the Iron Gates I storage lake, the largest hydro technical arrangement in Romania and throughout the Danube, with an area of 700 km<sup>2</sup> and a length of 130 km. The management of the park, through its management plan, has always pursued and sought to improve the negative effects of the construction and existence of the dam and storage lake.

On the right bank of the Danube, the Republic of Serbia has established the Djerdap National Park, which together with the Iron Gates Natural Park forms a unitary ecosystem, a circumstance that may favor the future creation of a cross-border biosphere reserve similar to the Danube Delta Biosphere Reserve.



## **6. Conclusions**

The preoccupations of the Romanian state to protect certain areas in the Danubian basin are in a period before the conclusion of the Convention for the Protection of the Danube River, but this act of international law has provided a favorable and generous framework for the continuation and deepening of measures and actions of protection and conservation of the natural dowry that could be endangered by the human activities that are constantly being sought for solutions to ensure a comfortable living.

The essential element of the Convention is the commitment of the signatory states to cooperate in the protection and sustainable use of the river. Beyond the instruments, the forms of cooperation and the ways of its realization, established by convention, which currently works more or less, the example of Romania's collaboration with Yugoslavia is highlighted. These states are the only ones that have jointly built a hydro-technical navigation and energy system in good conditions and they are all able to make a cross-border biosphere reserve.

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