

## **Interpretations and Implementation of the Regulations on the Protection of Danube Delta Biosphere Reserve**

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**Abstract:** The Danube Delta Biosphere Reserve, part of the UNESCO world patrimony since 1992, enjoys an enhanced legislative protection regarding the protection of fauna and flora. In Romania we find the legislation in the field of traffic regulations on ships and boats on the Danube, on canals and inland lakes in the Danube Delta area, and in fisheries and protection of animals and plants. The state of the environment in the Danube Delta Biosphere Reserve is constantly analyzed, achieving annual public reports. The aim of the paper is the interpretation of legal provisions both in the field, making proposals *de lege ferenda* for the smooth running of traffic and environmental protection in the Delta.

**Keywords:** Delta Danube; UNESCO; environmental protection; river traffic; maritime traffic

### **1. Introduction**

At the end of a road of over 2,800 km, the Danube, the second longest river in Europe, builds at the mouth of the Black Sea one of the most beautiful deltas in Europe and around the world even, known as one of the great wetlands of the planet.

The Danube Delta is the only delta in the world declared a biosphere reserve with an surface of 580 000 ha (2.5% of Romania's territory), being a living museum of biodiversity with 30 types of ecosystems and the most extended area of reed on the planet.

The universal value of the Danube Delta Biosphere Reserve was recognized in 1990 with its inclusion in the international network of biosphere reserves, within the "Man and Biosphere (MAB)" Programme, launched by UNESCO.

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In compliance with the Law no 82/1993 Danube Delta Biosphere Reserve covers the following geographical physical units:

1. Delta Danube;
2. Maritime Danube up to the Cotul Pisicii/Cat's Bend;
3. The Sector Isaccea- Tulcea with floodplain;
4. Murighiol-Plopu Salts;
5. The lagoon complex Razim-Sinoe;
6. Black Sea coast from Bratul Chilia/Chilia Arm to Capul Midia/Cape Midia;
7. Internal maritime waters and territorial sea to 20 meters isobaths.

Danube Delta Biosphere Reserve is divided into four functional areas, as follows:

1. Strictly protected areas - 20 areas with a total area of 50,904 hectares (8.7% of the reserve). They are necessarily protected and they represent very unobtrusive samples, being representative for the ecosystems in the reserve.
2. Buffer zones - have been established around the strictly protected areas occupying a surface of 222,996 hectares (38.5% of the reserve) being designated to mitigate human impact on the protected areas.
3. Areas of sustainable development covering a surface of 306,100 hectares (52.8% of the reserve) and they are formed of land located in easily flooded areas, land dams used for agriculture, fisheries, forestry and land for human settlements.
4. Ecological restoration zones are areas of land where the Reserve Administration conducts rehabilitation and revegetation of the ecological balance of the affected area, being used appropriate technical means and technologies.

## **2. Movements of Ships and Boats in the Danube Delta Biosphere Reserve**

The government has adopted a decision approving the rules on access and movement of ships and boats along the canals and inland lakes in the Danube Delta Biosphere Reserve. Article 1 sets out the extent of the areas where the Government Decision applies.

Whatever the purpose, the duration and calendar period, the access and movement of ships and boats along the canals and inland lakes in the Danube Delta Biosphere Nature Reserve perimeter will be made only in accordance with an access permit issued by the Administration Danube Delta Biosphere Reserve. The Administration issues a permit with a validity of maximum one year, and ships and boats have an obligation to keep it on board. In case of breach of legal provisions the access permit may lose its validity. Under the relevant legislation, the ships and boats will be equipped with electronic devices and monitoring systems established by the Danube Delta Biosphere Reserve Administration.

If we analyze the legislation in the domain of circulation in the Danube Delta Biosphere Nature Reserve we will notice a speed limit for ships and boats depending on the area where it travels. We also find that there are areas where the maximum speed is 5 km / hour in other areas is 15 km / h or 40 km / hour, depending on the importance of the area. In the Appendices 1, 2, and 3 of the Romanian Government Decision there are details for each region and depending on the appendix and the assigned area, we will determine the speed as follows: up to 40 km / h areas in Annex 1, maximum 15km / h in areas from Annex 2 and a maximum of 5 km / h in Annex 3.

According to article 8, paragraph 2 of the Government Decision of Romania in the Danube Delta Biosphere Reserve is forbidden to use any type of water Moto vehicle and the access of amphibious craft such as the air boat vehicles and hydroglider type, regardless the purpose. Also, vessels are required to be equipped with storage facilities and waste treatment, wastewater treatment plants and discharge connections, in accordance with the current law.

In case of accidental pollution, the ship / boat's Capitan is obliged to announce in maximum of 2 hours the Administration of the Danube Delta Biosphere Reserve and take all the necessary measures to limit pollution and its aftermath. In addition, any waste will be unloaded only in places specifically established, and if a Vessel does not find such sites they are obliged to keep the waste on board until they find the route towards these places for storage the waste.

In the strictly protected areas of the Danube Delta Biosphere Reserve it is strictly prohibited the access and navigation. In Appendix 2 there are strictly defined the places for mooring ships and list of items allowed for mooring / stationary pontoons in Danube Delta Biosphere Reserve.

In case there are detected deviations from the Romanian Government Decision on the movement of ships and boats along the canals and inland waters of the Danube Delta Biosphere Reserve there will be applied sanctions of contravention nature by the agents of the Danube Delta Biosphere Reserve under the article 14, the offenders can pay within 48 hours after handing the minutes or the date of its communication, half of the minimum fine stipulated in article 14.

### **3. Fishing in the Danube Delta Biosphere Reserve**

Fishing is one of the oldest occupations of the population of the Danube Delta, representing a lucrative economic activity for more than half of the working population in the area. The people interested in commercial fishing can get an online permit for fishing in the Danube Delta Biosphere Reserve. In the case where the Delta residents are not interested in their commercial fisheries there is guaranteed the right to fish for their own consumption. So, either commercially or family purposes, all families residing in Delta deal with this activity.

In Romania, the State Administration began in 1985 under the leadership of Gregory Antipas the development of management principles of fisheries in non-regularized rivers and deltas, which are still valid. In 1986 the first law on fishing was passed which had stopped fishing for fish below a certain minimum level, introducing regulations that are based on a good knowledge of the biology of fish species, the potential of areas and the role of biological factor.

Currently, the exploitation of fishery resources in the Danube Delta Biosphere Reserve is regulated by a series of legislative acts and norms for their implementation, so as to ensure their sustainable use.

Depending on the purpose of the catch in the Danube Delta there are used several fishing practices, namely: commercial, sporting, scientific and families. Depending on the biology of the species we will distinguish between fishery of freshwater fish, fishery of migratory marine fish and fishery of coastal marine fish.

The commercial fishing activity is achieved in several areas, using fishing methods and fishing tools specific to each area.

Fishing in the Delta Danube is achieved throughout the year, except the prohibition period of 60 days (its beginning and end of the period is being set annually by order of the Ministry of Agriculture and Sustainable Development, e.g.: in 2015: 11.04.2015- 06.09.2015). the achieved catches in the Danube Delta are

predominantly of the following species: crucian, carp, bream and roach. In this area there are captures crayfish and frogs.

By Order 386/391 of February 13/ March 4, 2005 approving the measures to regulate fishing effort and quotas allocated in 2015 on species and on areas, the Ministry of Agriculture and Ministry of Environment and Sustainable Development, Water and Forestry established the total allowable catch and fishing effort for the main fish species in Danube Delta Biosphere Reserve. The quantities and the areas where it can be caught may be found in the current order in Annex 2.

#### **4. Tourism**

In May of 2009 it was completed by the Tulcea County Council the Strategic plan for sustainable tourism development in the Danube Delta. In the Danube Delta Biosphere Reserve the access for tourism is taxed by a fee set by Order no. 610 of 19 May 2009. Any tourism activity in the Danube Delta Biosphere Reserve would be authorized in advance by the Regulatory Service-Authorization Development of the Danube Delta Biosphere Reserve Administration. The access with vessels and boats in the Danube Delta Biosphere Reserve and vehicle access shall take place only under strict rules. The tourists are not allowed in areas with full protection having the right to use only approved routes, being recommended the use of specially trained guides for Delta. If the tourists want moving out on major routes, this is permitted only with rowboats.

Moreover, the individual tourists must take out from the reserve all the plastic, paper, metal or glass that contained their food. The tourist has the obligation not to cut trees or plants in the reserve, and if it wants to camp, they must look for areas designated for this purpose. The access of tourists in colonies of birds is banned and also the perturbation of solitary nests and chicks.

So, whatever form of tourism that we want to operate in the Danube Delta Nature Reserve we must respect the rules and regulations implementing the norms, so they use natural resources in a sustainable purpose.

#### **5. Conclusions**

Analyzing the above, we see that the Danube Delta Biosphere Reserve is an objective of national interest, but also internationally due to the specific of the area.

Thus, when analyzing the European legislation we see that the fauna of the delta, being rich and varied in species of mammals, birds, reptiles, amphibians, fish, crustaceans, snails, mollusks and insects is protected by the Directive of the European Council (Annex I) 92/43 / EC on the preservation of natural habitats and of wild fauna and flora. Some of the protected species that live in the Danube Delta we will find on the red list of the International Union for Conservation of Nature, an international organization founded in October 1948 dedicated to conserving natural resources.

The national park shelters and provides food and nesting conditions of many migratory, passage or sedentary birds protected at European level and listed in Annex I of EC Directive 2009/147 / EC of 30 November 2009 on the preservation of wild birds.

Another aspect, not negligible, it is the aging of the Danube Delta. Being one of the most beautiful deltas in the world the Delta Danube runs the risk of becoming dry land for 100 years, if the human factor should not interfere by various artificial works. Besides the Danube carries a huge sediment quantity (45kg/second), the aging of Delta Delta is accentuated also by farming and chaotic cutting of reed that was effected during the communist period. If during the communist period the 80,000 hectares of the Delta became farmland, currently it has only managed to recover 10,000 hectares, the recovery was achieved through projects financially supported by the Romanian government and the European Union.

In conclusion, if Europe continues to be proud of the Danube Delta Biosphere Reserve it should be continued the financially support efforts at local, European and global level for the total recovery of the reserve. This effort will be in conjunction with a national and international law capable to maintain the rebuild of Danube Delta. So one of the elements that would help restore the Danube Delta would be the creation and use as urgent as possible sewage treatment plants in all the localities that are part of the Danube River basin, this collecting the water of a hydrographic basin covering 8% of the European continent.

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