Funded by
the European Union

Twinning for a Green Future

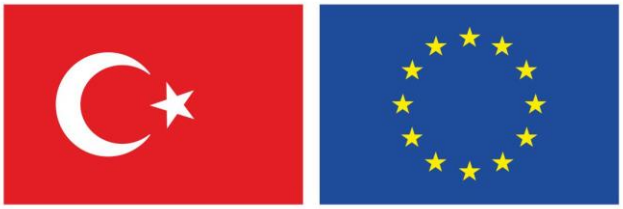
Town Twinning Action BetweenTurkey and The EU-II

Partnership on Sustainable Agriculture and Mitigation to Climate Change

TR2020/DG/01/A2-01/089

Partnership on Sustainable Agriculture and Mitigation to Climate Change

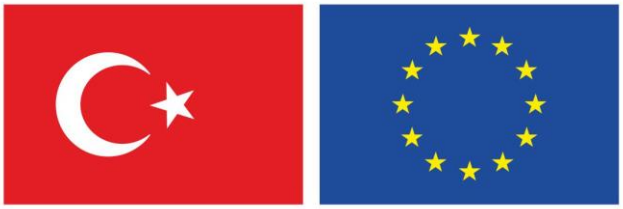
Report on the Agricultural Biodiversity of Brăila / Romania



Funded by the European Union

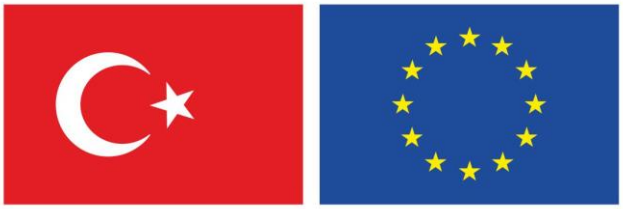
This publication was funded by the European Union. Its contents are the sole responsibility of

"Dunarea de Jos" University – Galati - Romania and do not necessarily reflect the views of the European Union.



Funded by
the European Union

CONTENT



Funded by
the European Union

1. GENERAL DATA ABOUT BRAILA COUNTY

Geographical location

Braila County is located in the plain, in the south-east of Romania with a total surface of 21.449 ha (urban - 5.716 ha and rural - 15.733 ha) occupying part of the lower Siret Plain, part of the Baragan Lowland , small portions of the Salcioara Lowland and Buzaului Lowland.

In the East, Braila County comprises the Great Braila Island. It accounts for 2% of the entire country.

The position on the map of Romania is given by the following coordinates:

- 28 degrees and 10 minutes eastern longitude, the extreme point being the commune Frecatei;
- 27 degrees and 5 minutes west longitude, the extreme point being the commune Galbenu;
- 45 degrees and 28 minutes northern latitude, the extreme point being the commune Maxineni;
- 44 degrees and 44 minutes south latitude, the extreme point being the commune Ciocile.

Braila County neighbours Galati county to the north, Tulcea county to the east, Ialomita County to the south and Buzau county to the west.

The network of localities includes three towns, namely Faurei, Ianca and Insuratei and forty (40) communes.

Pedo-climatic conditions

Braila County, being located in the countryside, has a generally uniform relief, the only land features being the flowing waters, the potholes and the lake depressions.

The hydrographic network of Braila county bears the mark of the temperate-continental climate and the relief made up of relatively smooth fields, within which there are wide valleys and closed depressions, in which there are temporary or permanent lakes. The most important hydrographic artery of the county is the Danube with its two main branches: the Macin Branch (Old Danube) towards Dobrogea and the Cremenea Branch, towards Braila Lowland, enclosing in the middle the former Balta a Brailei, which today is dammed.

The Danube is of great economic importance, both in terms of water supply to Braila and irrigation systems.

Siret river delimits the northern part of Braila County from Galati County, on a length of 50 kilometers. On the right side, at Voinesti, it receives the Buzau river as a tributary, which waters the territory of Braila county on a length of 126 kilometers.

Funded by
the European Union

Between Jugureanu and Gura Calmatui, on a distance of 84 kilometers, flows on the territory of Braila County, the river Calmatui, which is mostly arranged for irrigation.

In Braila County there are steppe and meadow lakes. A first category is that of the lakes confined in the large loess or potholes subsidence depressions (Ianca 332 ha, Plopu 300 ha, Lutul Alb 357 ha).

Another category of lake basins is formed by riverbanks. (Jirlau 1086 ha, Ciineni 74 ha, Ciulnita 92 ha).

Meander lakes and abandoned arm lakes are found especially in the Danube meadow (Blasova 400 ha, Japsa Plopilor 76 ha), on the Calmatui river terrace (Sarat Batogu, Bentu Batogu) and near Braila (Lacu Sarat).

The waters of Lacu Sarat-Braila, Sarat Batogu, Tataru-Ciineni and Movila Miresii have therapeutic effects, Lacu-Sarat and Ciineni being declared spa resorts.

Lakes Jirlau, Ciulnita, White Clay, Plopu, Ianca and Blasova are arranged for fish farming. In Braila County there are also artificial lakes for fishing or irrigation: Maxineni, Gradistea, Insuratei, Ulmu, Brotacelu.

There are also reservoirs such as Galbenu and Satuc lakes on the Valea Boulului bet, as well as Mircea Voda on Buzoel Nord, whose water is used for irrigation.

The climate is temperate continental with more excessive nuances in the west and more moderate in the Siret Plain and the Big Island of Braila.

Located near the Black Sea, Braila County has average temperatures 1.5 degrees Celsius higher than the rest of the plain.

The average annual temperature is 10.5 degrees Celsius, the absolute maximum recorded in 1951 reaching 44.5 degrees Celsius, the absolute minimum falling to 30 degrees Celsius (1942).

The annual relative humidity of the air reaches over 72%, in winter it exceeds 80%, while in summer it represents 65%.

Annual rainfall is low (on average 456 litres of water per square metre) and heavy in summer.

The annual amount of precipitation does not cover the needs of obtaining large agricultural productions, the water deficit being covered by irrigation.

Funded by
the European Union

2. GENERAL NOTIONS ON BIODIVERSITY AND BIOSECURITY

Biodiversity is the totality of living organisms from aquatic and terrestrial ecosystems, as well as of the ecological complexes to which they belong.

Biodiversity encompasses the diversity of species within them, as well as the ecosystems they create.

Today, the thriving biodiversity we should be enjoying has been depleted due to global population growth and the depletion of many natural resources.

Even if attempts are made to restore or maintain biodiversity, conservation measures are threatened by a number of global processes and phenomena, such as acid rain, the greenhouse effect, ozone depletion, soil erosion and desertification.

Biosecurity is a term used to describe efforts to reduce and/or eliminate potential risks resulting from the application of biotechnologies and the use of their products.

The term biotechnology defines any technological application, in which biological systems, living organisms, their components or derivatives are used, for the realization or modification of products or processes of specific use.

ARGUMENT

Our existence depends, to a large extent, on the richness of the natural resources of the environment in which we live and on the conditions offered and created.

One thing is certain and proven throughout history, namely that man is the determining factor of disasters, but also of progress and of increasing the quality of life. Our existence on planet Earth is an ethical issue in which positive actions are the guarantor of promoting the modern concept of sustainable development. Only by protecting the integrity of the environment and managing our natural resources wisely will we be able to preserve our heritage for future generations.

Today we have too many negative examples caused by human activities that have caused disastrous consequences for life on Earth, leading to climate change and unprecedented ecological mutations.

By embracing the concept of sustainable development in a way that respects the environment in which we live, we will truly build confidence and hope for the better.

3. BIODIVERSITY AND FORESTS

3.1. BIODIVERSITY

3.1.1. Natural habitats

The main habitat types in Braila county are :

- Forest habitats:

The habitats with forest vegetation are generally forest of the riverside coppice type (about 5% of the area of the county), willow, mixed or plantation (protective curtains).

They are located:

-80% in the floodplains of the Danube, Buzau and Siret rivers (predominantly poplar and willow);

-20% are terrace forests in the county, mainly composed of acacia and oak, the most important being the bodies: Viișoara, Colțea, Tătaru, Râmnicelu, Romanu, Rubla and Lacu Sărat.

Types of forest habitats:

- Oak mixed with Quercus pubescens on salt flats steppe soils;
- Steppe forests with pedunculate oak (Quercus pedunculiflora);
- Stejăreto - dobrogean elm with Quercus pedunculiflora;
- Mixture of meadow elm with pedunculate oak (Quercus robur);
- Hasmac shrub with Fraxinus excelsior;
- Meadow elm with Ulmus campestris;
- Alluvial forests (water meadows) of white poplar (Plopus alba) in the riverside coppice;
- Black poplar (Plopus nigra) water meadows in the riverside coppice;
- Mixed water meadows of Poplar alba and P. nigra in the riverside coppice;
- Willow water meadows (Salix alba) in the riverside coppice;
- Mixed water meadows of poplar and willow in the riverside coppice;
- Willow meadows and saltcedar (Tamarix ramosissima) in the riverside coppice on salt soils.

- Grassland habitats (meadow grassland, steppe grassland and bushes)

Grassland habitats are better represented only in the perimeter of the Baltă Mică a Brăilei Natural Park, being most affected by intensive grazing of animals left in a semi-wild state (cows, horses, but especially pigs) as well as by sheep grazing, by the accumulation and decomposition of sheep droppings leaving only species resistant to soil acidification.

The steppe grasslands are strongly modified, with grasses and xerophytic grasses including Festuca valesiaca, Stipa lessiongioana, Stipa capillata. On steppe fallow lands (uncultivated agricultural lands) species such as Cynodon dactylon, Bromus tectorum, Salsola ruthenica and Artemisia austriaca are found.

The marshes have the least development, either being part of the grassland structure or existing isolated, in small areas, in meadow areas with sandy banks.

- Aquatic habitats :
  1. lakes (salty and sweet)
  2. puddles (permanent and temporary)
  3. swamps
  4. swampy areas
  5. channels

The aquatic habitats are quite diverse, ranging in representation from the arms of the Danube and the water clearings of the floodplain to various fresh or salt lakes located on the territory of the county, being also those that, despite the human impact, have best preserved the natural biological diversity characteristic of the region.

There are three categories of lakes in the county of Braila: clastocarstic (lakes confined in loess subsidence depressions or potholes), also called pothole lakes, riverbanks and meadow lakes. The first category includes Ianca (332 ha), Plopu (300 ha), Lutul Alb (357 ha), Movila Miresii (180 ha), Secu (108 ha), Tătaru (137 ha), Colțea (117 ha), Plașcu (271 ha) and others, and the second: Jirlău (836 ha), Ciulnița (92 ha) and Câineni (74 ha), and the third category includes the lakes in the Danube meadow.

Meander and deserted arm lakes are found particularly in the Danube meadow (Blasova 400 ha), Japșa Plopilor (76 ha), on the Calmamatțui river terrace (Sărat Batogu, Bentu Batogu) and near Brăila (Lacu Sărat Brăila).

There are also reservoirs such as Galbenu and Satuc lakes on Valea Boului stream and Mircea Voda on Buzoel Nord, whose water is used for irrigation.

An important category of surface water is saline therapeutic lakes with sapropelic mud. These are Lacu Sărat I and II, Câineni Băi, Movila Miresii, Batogu.

The Salt Lake Braila is located 16 m above sea level and surrounded by 70 ha of forest that mitigates the steppe climate making the resort a pleasant place to rest. The lake, with a high salinity, is an old course of the Danube, now blocked. The bottom of the lake is covered with sapropelic therapeutic mud. The therapeutic value of the water and mud from Lacu Sărat resort has been known for a long time by the inhabitants of this region, but lately, many tourists come here for treatment.

Salt Lake Braila is unfortunately the only therapeutic lake whose resources are currently exploited. The total volume of existing or estimated therapeutic mud is 138404.5 m3 and the total

volume approved for exploitation is 535.62 m3.The mud reserve has been estimated on two exploitation perimeters leased by the two economic agents exploiting this resource.

Câineni and Movila Miresii lakes were exploited until 1990-1993, after which the assets ensuring the exploitation of therapeutic resources were privatized (Câineni) or the exploitation facilities were abandoned and even demolished (Movila Miresii). For the salt lake Câineni, the National Agency for Mineral Resources issued the concession license for exploitation for 20 years to S.C. Florgeus Prod.Com. L. R. L. Bucharest but so far this company has not started any exploitation activity. Since the characteristics of this lake are those of a mineral water deposit of the chlorosodium-sulphate-magnesium and sapropelic mud type, the exploitation will consist of using these resources for therapeutic purposes, the extraction of mud being authorized for a volume of 190mc/year.

There are also freshwater lakes and fish farms such as Blasova, Șeicuța, Plopu, Lacul Dulce, Popa and the fish farms of Măxineni, Gradiștea, Lutul Alb, Vultureni, Esna, Seaca, Zăvoaia and Jirlău.

Lakes Jirlău, Ciulnița, Lutul Alb, Plopu, Ianca and Blasova were developed for fish farming, but at present this activity is almost non-existent.

Of the habitats protected at European level for the conservation of rare or endangered species of flora and fauna, those characteristic of wetlands are best represented, with the greatest diversity existing in the floodplain of the Danube

3.1.2. Wild flora and fauna

Flora

The influence of man has left its mark on the spontaneous vegetation of Braila County. In the more distant past the characteristic vegetation was represented by steppe in the lowland areas and by meadow and marsh vegetation in the Baltă Brăilei.

More than 95% of the steppe has been grubbed up and replaced by crop vegetation (agricultural crops). Today it is found only on islands, on natural meadows as well as along roadsides, valley sides, along the dams and irrigation canals.

Only one third of the Baltă Brăilei remained free from flooding, the remaining more than 60,000 ha currently constitute the agricultural enclosure of the Big Island of Braila. Remnants of the flora of this vast wetland territory can now be found in the 10 islands of the floodplain that make up the Baltă Mică a Brăila Nature Park. The paludal vegetation of the islets is characterized by rare species, monuments of nature, such as white and yellow water lilies, species that are more common only in the Danube Delta.

The Flora found in the forests of Braila County includes the following woody species: European red pine (Pinus sylvestris), Black Pine (Pinus nigra), Lawson cypress (Chamaecyparis lawsoniana), phlox Oak (Quercus pedunculiflora), pedunculate oak (Quercus robur), downy oak (Quercus pubescens), Austrian oak (Quercus cerris), swamp oak (Quercus palustris), common ash (Ashinus excelsior), green ash (Fraxinus pennsylvanica), wych elm (Ulmus campestris), fluttering elm (Ulmus laevis), Siberian elm (Ulmus pumila), Norway maple (Acer Platanoides), field maple (Acer Campestre), Tatar maple (Acer tataricum), boxelder maple(Acer Negundo), black locust (Robinia Pseudacacia), pagoda tree (Sophora Japonica), thorny locust (Gleditsia triacanthos), Persian walnut(Juglans regia), eastern American black walnut (Juglans nigra), white mulberry (Morus Alba), silver linden (Tilia tomentosa), Catalpa (catalpa bignonioides), Koelreuteria (koelreuteria paniculata), European wild pear (Pyrus Pyraster), European crab apple (Malus sylvestris), mahaleb cherry (Prunus mahaleb), Russian olive (Elaeagnus angustifolia), saltcedar (Tamarix ramosissima), sea buckthorn (hippophae rhamnoides), myrobalan plum (Prunus cerasifera), Blackthorn (Prunus Spinosa), black cherry (Prunus serotina), common barberry (Berberis vulgaris), dog rose (Rosa Canina), common hawthorn (caractaegus monogyna), false indigo-bush (Amorpha fruticosa), European smoketree (Cotinus coggygria), lilac (Syringa vulgaris), Common Privet (Lugustrum vulgare), mistletoe (Viscum album).

Endemism

There are two endemic species-Campanula rotundifolia L., ssp. Romanica Savulescu Hayeck and Achillea coarctata Poir, which grow only on Popina Blasova-witness of Hercynian erosion (natural monument).

Fauna

Zoocenoses are specific to the habitat types described above, the most complex being characteristic of (mixed) forests and permanent pools.

Invertebrates are represented by the largest number of species across all ecosystem types, with a relatively even distribution.

Vertebrates are less numerous, both in number of species and in number of individuals.

For a number of 93 species, considered to be of community interest according to GO 236/2000 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, approved with amendments by Law 462/2001, special conservation areas and special bird protection areas must be established and 115 species are under strict protection.

Fish

Sixty-eight fish species have been identified, mainly present in permanent pond and channel ecosystems.

Birds are the most numerous of the vertebrates, with an uneven distribution. They are mainly concentrated in the zone of mixed forests, puddles and swampy areas. Many species belong, from a phenological point of view, to the migratory group (summer, winter or passage guests), very few being sedentary and remaining in winter inside the islet of the Danube meadow. As a percentage, the avifauna in the Balta Mica Natural Park of Braila represents over half of that of Romania, respectively 53%. Of these, 169 species are protected at European level (Bern), 58 species are migratory birds protected by the Bonn Convention and 6 species protected by the CITES convention. Also, 51 species are listed in Annexes I and II/1 of the Birds Directive.The fact that the Braila floodplain is part of the international network of nesting and passage sites, located on the eastern Danube migration corridor, was one of the most important reasons why this area was declared a protected area and subsequently recognised as a RAMSAR site - a wetland of international importance.

Mammals are better represented in terrestrial ecosystems and weaker in aquatic ones in the small basin of Braila. Among them are to be remembered: otter (Lutra lutra), wild boar (Sus scrofa), deer (Capreolus capreolus), Wildcat (Felis silvestris), the hare (Lepus europaeus), the fox (Vulpes vulpes), weasel (Mustela nivalis), the ferret (Mustela putorius), badger (Meles meles).

3.1.3. Species of wild fauna and flora valued economically, including as genetic resources

a) economically capitalized plant species

Forest species

The following species of woody flora found in the county's forests are economically valuable: phlox Oak , pedunculate oak, downy oak, common ash, green ash, South European flowering ash, Pallis' Ash, Pennsylvanian ash, field elm, Siberian elm, maple, field maple, Norway maple, acacia, thorny locust, walnut, Turkish cherry, willow, white hawthorn, Blackthorn , common hawthorn, European smoketree, cornel, black elder, common privet.

Species harnessed as genetic resources.

There are 58 ha of forests established as reserves for seed production and conservation of the forest genotype:

-pedunculate oak-Quercus pedunculiflora,

- a hibrid of Pennsylvania ash-tree-Fraxinus x pennsylvanica, Fraxinus x angustifolia and

- black locust-Robinia pseudacacia.

The most important are :

-The Camnița Forest Reserve (nature reserve code 2259) - 1.2 ha of pure ash forest, located in the Camnița forest (Râmnicelu commune)

-Viișoara Forest Reserve where there are 31.2 ha of pedunculate oak forest - Quercus pedunculiflora (nature reserve according to HCJ Brăila 20/1994)

In 2004, 72 environmental permits were issued for harvesting wild plants by individuals for commercialization on the domestic market. These plants are used for food and medicinal purposes, the highest quantities being found in horsetail, yarrow, mint, chamomile, celandine, elderberry, St. John's wort and mistletoe, species that are abundant in wild flora.

In 2004, 76 environmental permits were issued for the harvesting of wild plants by natural resources for the purpose of marketing on the domestic market. These plants are used for food and medicinal purposes, the highest quantities being found in horsetail, yarrow, mint, chamomile, celandine, elderberry, St. John's wort and mistletoe, species that are abundant in wild flora.

b) Economically valuable species of animals

In 2004 an environmental permit was issued for harvesting 720 kg leeches for export (S.C. Nicholas Trading Office S. R. L. Bucharest) for medicinal use (microsurgery).

Species of hunting interest

Species of hunting interest in Braila County are generally species characteristic of lowland fauna, wetlands and Meadow forests. According to Order M.A.A.P. no. 193 of 2002, Annex no. 1, the hunting fund of the county of Braila has a total area of 462955 ha and is delimited in 50 hunting funds, managed by the R.N. of Forests and 7 hunting associations. As last year, 7 of the 8 managers of hunting funds were authorized.

Starting with the 2002-2003 hunting season A.P.M. Brăila has only authorised collection quotas for game species for which hunting evaluations are carried out, according to the provisions of Ord MAPM 647/2001

. Collection quotas authorized by A. P. M. Brăila in the 2004-2005 hunting season compared to the 2003-2004 season.

3.1.4. Status of protected natural areas

The total area of protected areas in Braila county is 20405.38 ha, most of which is located in the floodplain of the Danube - Baltă Mică a Brăila Natural Park.

Table no . 2.1.4. Protected areas of Braila County

No. crt	Name	Act of declaration	Protected area Category	Sur face ha	Location	Administrator/Custodian
1	Baltă Mică a Brăilei	Law 5/2000 GD 230/2003	Natural Park Wetland of international importance (Site Ramsar 1074)	17529	in the natural floodplain of the Danube River, Romanian ecoregion no. 20, com. Chiscani, Gropeni, Stăncuţa, Berteştii de Jos, Mărăşu	RNP Romsilva Forestry Department Braila
2	Jirlău Lake	Law 5/2000	Nature reserve	838.66	Com. Jirlău, Vişani şi Galbenu	-
3	Camniţa Forest	Law 5/2000	Nature reserve	1.2	Com. Râmnicelu	RNP Romsilva Forestry Department Braila
4	Viişoara Forest	HCJ Braila 20/1994	Forest reserve	1897.8	Locality Insurăţei and com. Bertestii de Jos	-
5	Tătaru Lake	HCL Rosiori 21/2004 HCL Dudesti 33/2004	Provisional protection regime	138.72	Com . Roşiori and Dudeşti	-
Total area:			20405.38 ha			

3.1.4.1. Baltă Mică a Brăila Nature Park

Location

Baltă Mică a Brăilei Nature Park is located in the natural floodplain of the Danube River, between Vadu Oii and the municipality of Brăila, Romanian ecoregion no. 20, and is delimited as follows:
- to the south: the Danube branch in its two arms (3 km from Vadu Oii), the navigable Danube (lat. 44°45'16.02");
- to the east: the Vâlciu arm from km 237 to km 197, the navigable Danube from km 197 to km 186 (long. 27°59'55.23") the Cravia arm (Bratușca or Old Danube) from km 186 to where it meets the navigable Danube (km 174);
- to the north: confluence of the Arapu, Cravia and Navigable Danube (km174 lat.45°14a10.36 "N)
- to the west: the navigable Danube from km 232 to 216 (long. 27°49'12.08"E), the Pasca arm from km 216 to 209, the navigable Danube from km 209 to km 197, the Calia arm from km 197 to km 180 and the Arapu arm from km 180 to km 174.

The park integrates all 10 islets located between the arms of the Danube: O. Vărsătura, O. Popa, O. Crăcănel (Chiciul), O.Orbul, O. Calia (Lupului), O.Fundu Mare, O. Arapu, as well as the adjacent arms of the Danube.

It can be said that it is an inland delta on the lower route of the Lower Danube.

Surface

In law no. 5/2000, this protected area is mentioned with an area of 17529 ha. According to the latest assessments carried out by the LIFE 99 NAT/RO/006400 project, the area of the Baltă Mica a Brăila Nature Park is 21,074 ha (including the arms of the Danube), in various forms of ownership.

Protected natural values

Despite the changes that have occurred both in the structure of the integrating ecological systems and at its level, Baltă Mica of Braila preserves important ecological values, being an important component of the Lower Danube System, located upstream of the Danube Delta Biosphere Reserve.

It is the only area remaining in a natural hydrological regime (flood zone), after the indigation of about 75% of the former Balti of Braila and the creation of the agricultural enclosure of the Big Island of Braila.

Due to its attributes - wetland in natural hydrological regime, complex of ecosystems in different successional stages and buffer zone, Baltă Mica of Braila represents a reference system of the former inland delta and the basis for ecological reconstuction in the Lower Danube System.

Of the total area, about 53.6% is alluvial forest, 6% grassland, 12.84% wetlands and 27.5% lakes (mountain lakes and ponds).

Half of the identified ecosystems - ponds and specific floodplain forests - are natural, this area preserving mostly the structure and functions of the old Bălţi of Braila in the 1950s. They are also natural habitats of Community interest for which conservation priorities have been set.

This area is well known for its ornithological importance as it lies on the most important bird migration corridor in the Lower Danube Basin, halfway between the nesting sites in northern Europe and the wintering refuges in Africa. A large number of birds were observed, including 169 species protected internationally by the Bern, Bonn and Ramsar Conventions, representing half of the migratory bird species characteristic of Romania.

Because a lot of these are waterfowl, in 2001 Baltă Mică was declared a RAMSAR site (position 1074 on the Ramsar list), the second after the Danube Delta, according to the Ramsar Convention protecting wetlands of international importance as waterfowl habitat, to which Romania is a signatory.

Functional zoning was detailed in Order M. A. P. A. M. 552/26.08. 2003 on the approval of the interior zoning of national parks and natural parks, in terms of the need to preserve biological diversity.

Administration

According to Order M. A. P. A. M. 850/2003 on the procedure for entrusting the administration or awarding the custody of protected natural areas Baltă Mică a Brăilei Natural Park (PNBMB) was entrusted for administration to the National Forestry Regie "Romsilva" by the contract concluded between the Ministry of Environment and Water Management and the National Forestry Authority, with no. 744/MMGA/22.05.2004 and 65/RNP/21.05.2004.

The controls carried out in 2004 in the PNBMB followed the way R.N.P. through the Directorate Braila fulfils its contractual obligations, of which the following have been achieved so far:

1. The procedures for the creation of the Park's management structure have been carried out and so far 8 of the 13 posts provided for by *GD 230/2003 on the delimitation of biosphere reserves, national parks and nature parks and the establishment of their administrations have been filled through a competitive process and without double subordination*.

Thus 5 positions are for office staff (park director, head of security, economist, community relations and environmental education officer, IT specialist) and 3 for security guards.

Although incomplete for the time being, this structure is already operational, fulfilling its tasks according to the "Rules of organisation and functioning of the management structure",

approved by the R.N.P. The remaining posts will be filled during the second semester of 2005 and when the administration structure will be complete, it will be transferred from the Forestry Department of Braila to the National Forestry Department as a separate unit.

In order to carry out activities in the field, the new management structure has also resorted to collaboration with volunteers from the neighbouring localities of the BMNP, a solution that also contributes to public awareness and the concrete involvement of the inhabitants of the Park's cooperation area in nature conservation activities.

2. The technical and administrative means provided for in the annex to the contract to be passed on to the use of the PNBMB management structure, suitable premises and equipment for office work, as well as means of transport and other equipment for field work, were provided.

3. The training of the administration structure staff, in particular the newly hired security staff, has been started through participation in special field guide courses.

4. The composition of the Scientific Council and the Management Advisory Board established by Order M.M.G.A. 641/2004 and 721/2004 respectively after being approved by the Romanian Academy. The meeting of the two bodies is planned for February 2005.

5. A list of proposals for amendments to the Nature Park Regulations has been drawn up and will be discussed at the first meeting of the Management Advisory Board.

6. For the conservation of the natural heritage entrusted, the following activities have been carried out in accordance with the provisions of the Management Plan developed within the framework of the LIFE project 99NAT/RO/006400 and the legislation on protected areas:

a. The stands were reclassified to the functional category provided for by M.*A.P.A.M. Order 552/03 on the approval of the internal zoning of national and natural parks, from the point of view of the need to conserve the bi-lingual diversity* since only 19.19% of the stands falling within the perimeter of the special conservation areas were classified as functional type T1.

b. The delimitation and marking of the perimeter of the Park and the visual warning of the prohibitions to be respected on the territory of the protected area have started.

c. In order to organize the tourist activity, the main access points to the protected area were marked, some of the tourist trails (two in Ostrov Fundu Mare and 3 in Ostrov Insula Mica a Brăilei) were established and marked, and resting and smoking places were created, covered with pappus and equipped with table, benches, litter bin and sand basket for extinguishing cigarettes. It was also tried to raise awareness of the tour operators in Braila County about the tourism potential of PNBMB.

4. For public information, the PNBMB website was created: www.bmb.ro and in the summer of this

year environmental education activities were organized in partnership with the Dropia Brăila branch of the Romanian Ornithological Society.

5. The security activity has been organized by field agents and the anthropic activities taking place on the Park territory are constantly monitored. With the collaboration of the staff of the Forestry Directorate of Braila and the police stations in the localities bordering the PNBMB only during the months of September-November, a total of 10 control actions were carried out, aimed in particular at preventing and combating abusive grazing, evacuation of pigs left loose in a semi-wild state and dismantling of animal shelters. A total of 15 fines were applied, totalling 30 million lei.

6. For the monitoring of natural resources, the updating of the database and the implementation of EU Directives on nature protection, a LIFE NAT project is being worked on in partnership with the University of Bucharest-Department of System Ecology and Sustainable Development for which funding will be requested from the European Commission. Its main objective will be to identify sites of Community importance within the Park to be proposed for the Natura 2000 European Network.

7. For field scientific research, the repair of the avifauna observation towers was carried out.

8. The procedures for issuing the environmental permit for the construction on the park's territory of a barrack that will serve as a shelter for workers, both during the 7 years of ecological reconstruction works and after this period, when management and guard works will be necessary for the future arboretums. The realisation of this objective required an environmental impact study as it is located in an area of special conservation interest that will be part of the Natura 2000 Ecological Network.

9. Despite all the impediments and delays caused by excess humidity, 569 ha were afforested in 2004 within the Park perimeter, within the framework of ecological reconstruction projects on degraded land taken from the agricultural sector and in forestry.

10. This year's monitoring programme of the hydrochemistry of the ponds also targeted areas in the Fundu Mare and Popa (Insula Mica) islets, where semi-natural fish farms, Fundu Mare and Năvodari respectively, were operating. The values obtained for the eutrophication indicators analysed (which assess the content of phosphorus and nitrogen compounds) confirm that aquatic ecosystems are recovering and that the severe drought of 2003 did not have an irreversible effect.

Unlike in 2003 when the drought caused all the ponds in the park to dry up, in 2004 the situation was quite the opposite. The abundant rainfall and the increase in the Danube river level made it possible to feed all the ponds in the perimeter of the park through canals and channels, thus restoring all the aquatic ecosystems that disappeared last summer.

However, the water level of the puddles has risen to such an extent that many adjacent lands have been flooded and there is a danger that young plantations planted as part of ecological reconstruction projects could be destroyed. For this reason, water access was controlled by operating the dams on the Milea and Chirchineţu canals.

So during July and August the dams were opened to withdraw water from the plantations. Due to heavy rainfall in Ostrov Small Island (Popa), in the southern and western areas, around Begu, Vulpaşu and Feştilele ponds in many landscape units that have been under water the seedlings have bent and after the water receded the plantation remained invaded by specific pond vegetation and wet grassland. Through sustained efforts of manual intervention (by supporting each sapling with a stake) they were finally rescued. In some areas, even though the water has receded, the wet ground has delayed the execution of silvicultural work to maintain the plantations, especially mechanised felling. In November the dams were closed to prevent flooding of the land where planting work was being carried out.

With specific feeding and nesting habitats, all the conditions are in place to conserve the fauna specific to this internationally important wetland for waterbirds.

3.1.4.2. Nature reserves and monuments

In Braila county the three nature reserves - Camnița and Viișoara Forests and Lake Jirlău, occupy a total area of 2737.66 ha.

Camniţa Nature Reserve

Location

The reserve has an area of 1.2 ha and is located in Râmnicelu commune, near Constantinești village, between DJ 221 and Buzău river.

This reserve is located in the Camnița forest, a forest of about 550 ha, mainly consisting of black locust, white and black poplar and willow.

Funded by
the European Union

Protected natural values

The forest is a natural stand of ash - hybrids of Pennsylvania ash (Fraxinus x pennsylvanica and Fraxinus x angustifolia), mixed with black locust(8F+2SC), of unknown origin, about 45 years old. It was declared a reserve because the ash tree being predominant can be considered pure ash stand, which is a rarity in the landscape of Braila county.

This protected area is also a seed reserve, mentioned with the code FR-M280-3 in the "National catalogue of sources for forest reproductive material in Romania" (approved in 2001), the purpose of the selection being the quantity and quality of the wood.

The conservation status of the protected ash stand, with an area of 1.2 ha, shows a good capacity for natural regeneration that can ensure the maintenance of this naturally established stand, even if it does not correspond to the fundamental forest type. It has been shown that there is no negative anthropogenic impact through abusive felling or grazing and there is also a natural spread of ash in neighbouring landscape units so it has been proposed to increase the protected perimeter.

Jirlău Lake Nature Reserve

Location

The reserve is located in the west of Braila county, on the left bank of the Buzău river, on the territory of Jirlău, Vișani and Galbenu communes, with an area of 838.66 ha.

Protected natural values

The reservoir is a shallow, eutrophic lake with typical permanent pond vegetation and associations dominated by reeds, sedges and pipirigus. The lake provides passage, feeding, and nesting habitats for a range of migratory and sedentary wetland bird species. For this reason, the lake was mentioned in 1989 in the list of "Important Bird Areas In Europe", published in England.

The status of habitats and populations of birds of Community importance was monitored. Since in recent years the lake has not been exploited for fish farming and therefore no more water has been introduced from the Buzău River, due to the dry climate, the eastern sector, the Vișani body has dried up, disappearing almost completely and turning into a swamp invaded by reeds.

Currently the Vermatta company is in judicial liquidation, the lake being managed by the state domains Agency. Although all channels of public information (press releases and materials published on the website of APM Braila) were used to inform the public about the conditions for applying for the custody of nature reserves, there were no applications for the custody of Lake Jirlău. This is probably due to the fact that managing a protected area is perceived as entailing more obligations than benefits and for Lake Jirlău, if fish farming is not possible or profitable, it will probably not attract any investor to apply for custody. In such a situation, a compromise solution

has to be found, in the sense that someone has to take responsibility for the administration, by setting up a consortium of local government services or a partnership with non-governmental organisations.

Viisoara Forest Reserve

Location

The reserve has an area of 1897.8 ha and is located in the south of Braila County, on the administrative territory of Insurăței and Berteștii de Jos communes.

Protected natural values

The forest is a relic of the oak groves that populated the river sands on the right bank of the river Călmăţui, which favoured the advancement of the forest deep into the steppe until close to the Călmăţui's mouth in the Danube. Cut irrationally for hundreds of years, it regenerated naturally. Within it there are several specimens of the pedunculate oak, between 350-400 years old, including the 400-year-old "Princess Oak", probably planted by Stephen the Great. In the rest the age of the stands is 91-95 years.

It is a typical coppice forest, the component species being oak (predominantly the pedunculate oak - Querqus pedunculiflora) and black locust. The reason for taking under protection was precisely the existence of these oak stands, a rare species in the forests of Braila.

For the quantity and quality of wood, an area of 39.4 ha of this perimeter is also a semiological reserve, mentioned in the "National Catalogue of Resources for Forest Reproductive Material in Romania" (30.6 ha black locustand 8.8 ha pedunculate oak).

Provisional protection perimeter Tătaru Lake

In July 2004, A. P. M. Braila prepared and submitted to the Dudești and Roșiori Town Halls as well as to the County Council of Braila a memorandum on the need for a provisional protection regime for the Tătaru Lake and the management regulation of the protected perimeter.

The purpose of establishing the provisional protection regime is the conservation of biodiversity in accordance with the provisions of Council of Europe Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Council of Europe Directive 79/409/EEC on the conservation of wild birds, provisions transposed by OU236/2000 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna approved with amendments by Law 462/18.07.2001.

The provisional protection regime will be maintained until the establishment, by government decision, of the regime of protected natural area - nature reserve and site of Community importance, according to the provisions of OU 236/2000.

As a result, the *HCL Roşiori nr. 21/2004 and the HCL Dudeşti nr. 33/2004* "on the establishment of the provisional protection regime and the approval of the Regulation for the management of the protected perimeter of Lake Tătaru" were issued.

As provided for in this Regulation, in November this year A.P.M. Braila supported the setting up of the Committee for the implementation of the provisional protection regime (composed of the deputy mayors of the communes of Dudești and Roșiori and a representative of the Diana Bucharest Hunting and Sport Fishing Association - manager of the Tătaru hunting ground no.45 in the perimeter of which Lake Tătaru is located) and the establishment of a plan of future actions regarding the marking and restriction of economic activities with potential negative impact.

Monuments of nature in Brăila County.

Popina Blasova.

It is located NE of the Big Island of Braila, near Blasova Lake, opposite to locality Turcoaia.
Protected natural values

Being a witness of Hercynian erosion, it was declared a monument of nature due to its uniqueness in the relief of Braila county. Popina Blasova is part of the Geological Heritage - a structurally representative sample of the natural heritage in situ.

It has a height of approx. 45 m and an area of 2.3 ha. The mineralogical composition of poplin is formed by: coarse detritus - quartzite conglomerates and sandstones. It is the age of the mountains of Bohemia or the central plateau of France.

Due to the pedological conditions generated by the mineralogical composition of the poplin, the vegetation carpet on the northern slope, composed of grasses, includes two endemic species:
- Campanula rotundifolia L., ssp. Romanica Savulescu Hayeck,
- Achillea coarctata Poir (Yarrow with yellow flowers).

3.1.5. Anthropogenic pressures on biodiversity

Among the activities exerting anthropogenic pressure on biodiversity in the county of Braila should be listed the exploitation of some species through fishing and hunting, the use of inappropriate agricultural methods and techniques (use of pesticides, intensive grazing, unorganized grazing, burning of stubble, etc.). At the same time, the effects of interventions carried out several decades ago for land improvement or fish farming (elimination of excess moisture to obtain new agricultural land, modification of the water circulation regime in some ponds to facilitate fish harvesting) are still visible today.

With regard to hunting activities, the following points are worth mentioning:
Since 2002 all environmental permits issued by A. P. M. Brăila for hunting have included only species for which hunting assessments are made, considering that these can be assimilated to resource studies, as provided for by Order M. A. P. M. 647/2001 approving the procedure for authorizing the activities of harvesting, catching and / or purchasing and marketing on the domestic market or export of plants and animals of wild flora and fauna, as well as their import, art. 6, pp. 2 and art. 23.

Semi-wild grazing, especially with pigs, a traditional activity that is an important source of food and income for local people, is still a difficult problem to solve, being difficult to stop on the one hand due to the fact that there are more than 50 ha of pasture in the protected perimeter owned by inhabitants of local communities in the vicinity of the protected area, and on the other hand due to the material and legislative difficulties of removing animals by forestry and park administration staff.

Under the LIFE programme, a total ban on grazing in strictly protected areas and in buffer zones only with cattle on agricultural land in the category of grazing areas has been proposed.

Many aquatic ecosystems are drying up as a result of the deepening of the communication channels with the Danube for fish farming purposes years ago, which has produced changes in the water circulation regime. Naturally the Danube flooded the dry land and fed the puddles and after the flooding stopped the water springs remained for a much longer period, being affected only by evaporation-excessive transpiration in times of drought. The construction of the canals for fish farming purposes is currently causing the premature draining of water into the Danube, a phenomenon also favoured by the fact that, over time, the bottom of the pools has risen through the deposition of silt brought by the river.

3.2. State of forests

3.2.1. Forestry fund

In the county of Braila, the national forest fund occupies a total area of 22,748 ha, which represents less than 5% of the county area.

3.2.2. Economic function of the forest

The forests in Braila County fall into functional group I, performing the following main functions:

Type	Surface-ha	%
production and protection	19,828	87.17
genetic fond insurance	2,380	10.46
exclusive of protection	540	2.37

3.2.3. Wood mass put in the economic circuit

The average volume of wood mass / ha was appreciated at 81 m^3. This is determined once every 10 years for lowland forests and once every 5 years for lowland forests, by the Forest Research and Management Institute of Bucharest, during management studies, which also include a forest inventory. According to the latest planning work, the calculated gross wood mass of deciduous forests was 1420.9 thousand m^3.

In 2004, 84.9 thousand m3 of timber were harvested and put into the economic circuit, of which more than 85% was sold to economic agents and the rest to the population. Mainly softwoods, from main products (shavings and regeneration cuts), by-products (cleanings and trimmings) and incidental products.

Wood	Quantity
Oak	0.1
Other hardwood	3.1
Other softwood	81.7
Total	84.9

3.2.4. Distribution of forests by main landforms

Braila County is located entirely in the lowland area, the land occupied by forests or intended for afforestation being unevenly distributed over the county in isolated groups, most (90%) in the floodplain of the Danube River and in the inland river beds of Buzau and Siret.

3.2.5. The health of forests in Romania in 2004

According to D.S. Brăila, the state of health of the forests in the conditions of the existing stations is considered normal. Insect and plant pest control work was carried out on 478 ha.

2.3.6. Areas of the forest fund covered with felling

During 2004 a total area of 552 ha was felled as follows:

- clear felling (coppice) - 232 ha
- coppice felling with natural regeneration (willow) - 219ha
- replacements and restoration - 71ha

With the exception of the timber to be felled by the forestry offices, the timber was harvested by economic agents following the auctioning of the woodlots.

2.3.7. Areas with forest vegetation deficit and afforestation availability

According to Order M. A. P. A. M. no. 130/2004 for the approval of deficient areas in forests, the entire area of Brăila County is considered deficient. From the records of D.S. Brăila it appears that out of the total area of forest land, 1840 ha of swamps and unproductive land are considered to be land with a deficit of forest vegetation whose afforestation is not possible due to excess moisture.

The deficit of forest vegetation is being compensated by ecological reconstruction projects in the forest and on degraded land taken over from the agricultural sector through the creation of protection curtains according to Law 289/2002 (total area of 8,445 ha).

2.3.8. Impact of forestry on nature and the environment.

We believe that in the county of Braila we can speak of a positive impact of forestry on the environment precisely because of biogeographical and especially climatic conditions. The arid continental climate can only be improved by the existence of forests. Extensive afforestation

projects on degraded land taken over from the agricultural sector, both within and outside protected areas, will contribute to increasing the afforested area which is in deficit in the Braila area. At the same time this is a guarantee for the conservation of an important natural fauna heritage as a wide variety of species of community interest depend on forest habitats.

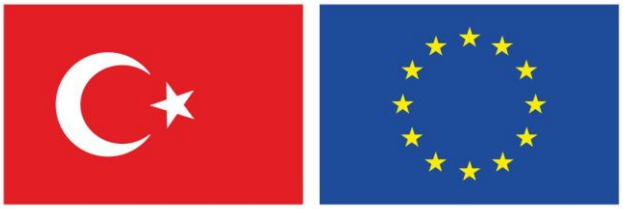
On the other hand, however, it should be noted that a negative impact on biodiversity has occurred in recent decades through the replacement of native species with highly productive allochthonous species or clones, obviously chosen on economic criteria. The result was the disappearance of typical willow, white and black poplar forests and steppe habitats due to the tendency to afforest as much as possible where agriculture could not be practised. As a remedial solution, recent ecological reconstruction projects have used mainly native species.

4. DIVERSITY OF AGRICULTURAL PRODUCTION IN BRAILA COUNTY

In Braila County the situation of the Land Fund by categories of use is as follows :

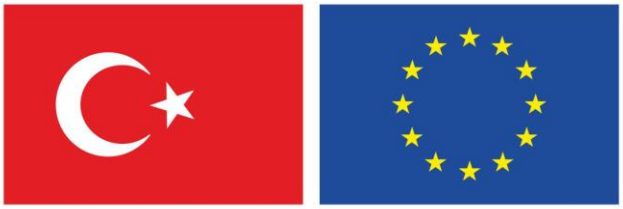
CATEGORY OF USE	Related area (ha)		
	Total County	State Sector	Private Sector
Agricultural :	386,969	2,946	384,023
of which: arable	348,874	2,946	345,928
pasture	32,301	0	32,301
hayfields	0	0	0
vineyards	4,541	0	4,541
fruit plantations	662	0	662
fruit shrubs	16	0	16
other tree plantations in agriculture	0	0	0

According to the statistical situation, in 2023 the crop structure and the yields obtained at the end of 2023 are detailed in the table below:



Funded by
the European Union

Culture	Area sown (ha)	Production achieved (to)
Autumn crops		
Wheat	65,820	315,936
Barley	24,385	136
Autumn barley	920	3,680
Rapeseed	7,935	18,251
Spring and perennial crops		
Spring oats	92	202
Spring barley	2,527	7,834
Rice	10	12
Corn	107,200	470,594
Sorghum grains	17	48
Sunflower	91,988	139,155
Soybeans	18,725	53,984
field peas	3,732	10,450
field beans	165	236
Chickpeas	50	125
Potatoes	85	1,485
Vegetables	878	11,234
Watermelons and honeydew	913	27,292
Coriander	100	105
Lavender	12	30
Fodder plants (annuals and perennials)	22,230	390,396



Funded by
the European Union

5. BIBLIOGRAPHY

1. Ecology and Environmental Protection - Ion Scurtu, Cristian Sima, Rozica Poşircã – Independenţa Economicã, Piteşti 2005
2. Environmental Quality Management - Constantin Oprean, Octavian Suciu – Academia Româna, Bucureşti 2003
3. Agricultural Chamber of Braila County – statistics, 2023

www.google.com → Danube water quality → Biodiversityhttp://www.google.com
Braila County