

# Biodiversity Assessment Report Romania 2001



Submitted to:  
USAID/Romania

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Prepared: September 2001  
Approved: January 2002





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This Biodiversity Assessment Report (BAR) for Romania was prepared for the U.S. Agency for International Development (USAID)/Romania mission. It addresses statutory concerns for biodiversity promulgated at Section 119 of the Foreign Assistance Act of 1961, as amended (“FAA”) [22 U.S.C. Section 2151(q)], and guidelines for environmental protection and natural resources conservation promulgated at FAA Section 117 [22 U.S.C. Section 2151(p)]. The statutory requirements of FAA Section 117 have been promulgated into USAID regulations at Title 22 Code of Federal Regulations, Part 216 (22 CFR 216), and have been incorporated into the USAID Automated Directives System at section 204 (ADS 204). The relevant sections of the U.S. Code have been included at Annexes I A and I B. USAID Romania prepared this report in preparation for its FY 2002- FY 2006 Country Strategic Plan.

To prepare the BAR, the project team extensively researched and compiled natural resources data. Interviews with scientific and educational institutions, governmental bodies, bilateral and multilateral donors, and the national and international NGO community were conducted. Field trips to Retezat and Piatra Craiului National Parks and the Danube Delta Biosphere Reserve were conducted to gain first hand experiences of some natural resources conservation areas and to meet individuals and organizations directly involved in bioconservation efforts in Romania. The BAR is not intended to be a comprehensive scientific summary of Romanian flora and fauna, rather it is designed to summarize major trends in biodiversity loss and conservation efforts in Romania. The BAR is divided into four chapters:

**Chapter 1** identifies Romanian biodiversity, identifying areas rich in species diversity as well as areas unique to Romania. This chapter describes major ecosystems, species endemism, and key habitats, and identifies key landscape features and areas for the conservation of biodiversity;

**Chapter 2** summarizes current and future threats to Romania’s biodiversity, providing information on endangered and threatened species, and summarizing policies, land use practices, pest/contamination sources, and transboundary obstacles to biodiversity;

**Chapter 3** describes ongoing governmental, bilateral donor, multilateral donor, NGO, and other efforts being undertaken in Romania to conserve biodiversity. These efforts include national conservation legislation, policies and strategies, international conventions, protected area management capacities.

**Chapter 4** includes a summary of efforts needed to conserve Romanian biodiversity, summarizes donor impact on biodiversity; and identifies potential opportunities to support biodiversity conservation.

This BAR was prepared entirely in country from August 6 to September 7, 2001. The Romanian NGO contractor retained by USAID, Ecological Group for Co-operation (GEC), provided two Romanian biodiversity specialists from its staff: Professor Dan Manoleli, Ph.D. of the University of Bucharest Department of Ecology; and Dr. Nicolae Galdean, of the Ecological University, Bucharest. John Hansen, a USAID Environment Officer, who worked closely with the project team, conducted interviews in Washington, D.C. and Romania, participated in field trips to gain first hand knowledge of Romanian biodiversity, provided technical guidance, and assisted in formatting, editing, and preparing the recommendations of the report. Overall, the team conducted 30 interviews with USAID staff, bilateral and multilateral donors, and local experts in forestry, natural resource and wildlife management, Danube delta conservation, governmental policy and regulation, bioconservation and other related matters. Individuals from different Institutions who were interviewed are presented in Annex II.

Numerous documents, including the Romanian Biodiversity Conservation National Strategy, the National Environmental Action Plan, World Bank Forestry Sector Note, reports from World Bank-funded biodiversity projects in the Danube Delta and Carpathian Mountains, and reports from the World Wildlife Fund Carpathian Ecoregion and Carpathian Large Carnivore Project, among others, were valuable sources of information for this report. A comprehensive listing of references is provided in Annex XIV.

The authors wish to express their gratitude to each of the individuals interviewed in the course of the study and to the experts who provided information that facilitated this assessment.

## Romanian Biodiversity Status

**1.1. Overview.** The Republic of Romania, which is located in southeastern Europe, shares its border with five countries. Clockwise from the south, these countries include Bulgaria, Serbia, Hungary, Ukraine, and Moldova. Romania's eastern border also includes approximately 228 km of coastline along the Black Sea. The country's 22.8 million inhabitants reside in a topographically diverse landscape constituting approximately 275,000 km<sup>2</sup>. Biodiversity is very rich in Romania, as natural resource extraction activities have never been fully implemented in the country.

Romania is located in Central Europe, halfway between the North Pole and the Equator, and also halfway between the Atlantic Ocean and Ural Mountains. The total area of the country is **23,839,100 ha**. The elevation of the country varies significantly, e.g. the Danube Delta is located at the sea level while the highest peaks of the Carpathian Mountains rise to over **2,500 m** above sea level.

In general, Romania has a temperate climate with significant zonal attributes. Some regions have high humidity with less temperature variability; a dryer continental climate exists in other areas, thus creating greater temperature variability. A considerable influence of the sub-Mediterranean warm and dry climate can be observed in the southern and western areas of the country. Overall the average annual temperature is **8-10°C**, with frosty winters (**-3° to -4°C**) and warm summers (**21° to 22°C**), and average annual precipitation between **400-600 mm**. Romanian soils are represented by a majority of all European soil types. Various levels of relief have been brought about by tectonic uplift of underlying volcanic, sedimentary, and metamorphic rocks.

Mountainous, grassland, and deltaic ecosystems dominate Romania's landscape. In the central and western parts of the country, mountainous areas comprise some **28%** of total land area, dominated by vast tracts of relatively undisturbed forest in the U-shaped Carpathian Mountains. Around the mountains, forests gradually give way to grasslands, which have been predominantly converted, to agricultural use. To the east, the Danube River completes its **2,850 km** course through ten countries as it discharges into the biologically rich Danube Delta. The Delta, one quarter of which is shared with Ukraine, covers approximately **580,000 hectares (ha)** [**1 ha = 0.01 km<sup>2</sup> = 2.47 acres**] (see **Map 1**).

Due to their unique biological and cultural significance, three areas in Romania have been designated as UNESCO Biosphere Reserves. These include a section of the northern Carpathian Mountains near Maramures and Rodna National Park, a section of the southwestern Carpathian Mountains, also known as the Transylvanian Alps, near Hateg, and Retezat National Park, and the Danube River Delta. These areas are currently protected, consisting of scientific reserves, forest protection areas, forest production areas, communities and buffer zones. Each is also protected at varying levels by local, national, and international law.

Today natural and semi-natural ecosystems cover approximately **47%** of Romania. Significant proportions of these are highly degraded. Agricultural lands cover some **30%** of the country. Native steppe and steppe-associated wet meadows have been systematically converted to cropland and pastures. The extent of loss of steppe is not thoroughly documented, but less than **10%** remains of some types of grassland and shallow marsh ecosystems that were once common in Romania. Forest covers about **30%** of the country, with roughly **35%** being plantation forests.

Streams, rivers, and wetlands have been negatively affected by sedimentation and chemical runoff associated with the new agriculture-dominated landscape and urban influences. These combined with poaching and dredging have contributed to a significant loss of commercial fishing in recent years, with beluga at **20%** of former levels. Draining of wetlands, elimination of native riparian vegetation, impoundment, and channeling of streams and rivers have all taken a serious toll on local aquatic resources in Romania. These activities have had greatest impact on the lower Danube River, the Danube Delta, and on the Black Sea.

Romanian forests face a serious challenge in the immediate future as approximately **30%** of standing forests are slated to be restituted to families of former land owners. These forests, which have been under state control for over **50 years**, are virtually intact and provide crucial habitat required for large mammals, watershed protection, and substantial economic reserves if sustainably harvested. Current forecasts, modeled on initial restitution efforts that resulted in wide-scale deforestation, indicate that future



forest owners may denude up to **20%** of forests restituted for immediate economic gain. Such an activity will result in forest fragmentation, which will disrupt genetic flow and habitat suitability throughout Romania's forests. In addition, the growing tourism base relies heavily on the beauty of the setting in Transylvania, which stands to suffer greatly in the event forests are decimated. Lastly, deforestation contributes to global and local climate change, which in turn is disruptive to forestry and agriculture.

The precipitous decline of many natural habitats over the past **100 years** threatens many species and has caused others to vanish from the landscape in Romania. Although they once ranged throughout Romania in lowland forests, agricultural, urban and industrial developments have forced large mammals such as the red deer, bear, lynx, and wolf into mountainous areas. Fortunately, these species are currently flourishing in Romania's Carpathian Mountains, but their futures are uncertain due to limited protection of their habitat and the short-term economic drive to deforest private lands. Information is insufficient to determine the status of insects and many other less obvious organisms, but some of these species are likely extirpated from Romania and many others are certainly in jeopardy due to habitat destruction and pollution. Furthermore, many of the species and ecosystems threatened in Romania are under siege throughout their range; some are threatened with extinction from pollution and habitat encroachment. Invasive species, a growing problem in some natural systems, have been found to have a negative impact on agriculture, forests, and fisheries. The impact is as yet poorly understood with the exception of some pest species. Some examples of invasive species include:

**Mammals:** *Oryctolagus cuniculus* (wild rabbit of Europe), *Dama dama* (fallow deer), and *Ovis aries musimon* (mouflon) were introduced to enrich hunting. They are neutral to the local fauna, as they do not have the capacity to overspread. *Nyctereutes procyonoides* (enot), and *Ondatra zibethica* (muskrat) introduced by hunters, are becoming pests in small wood and clay dams. *Nyctereutes* is disrupting small carnivore populations as it outcompetes them for prey.

**Birds:** *Streptopelia decaocto* (collared dove) and *Passer hispaniolensis* (Spanish sparrow) are extending their range throughout Europe without direct human intervention (e.g. without being introduced). *Phasianus colchicus* (pheasant) were introduced to enrich hunting and are now found in some protected areas. Strict management efforts are required to avoid its spreading into other protected areas.

**Fish:** *Pseudorasbora parva* was accidentally introduced from China together with phytophagous species. *Lepomis gibbosus* and *Ictalurus nebulosus*, North American species introduced into Europe as pets, have extended their range throughout the continent. These fishes have no economic importance, however they are competitors with local economically important species.

**Insects:** *Hyphantria cunea*, *Cydia molesta*, and *Leptinotarsa decemlineata* were accidentally introduced from North America and have become serious pests in Europe.

**Plants:** *Elodea canadensis*, *Eichornia crassipes*, and *Vallisneria spirallis*, aquatic invasive plants, are now pests in lakes and ponds and competitors with local species.

While virtually all the changes to the landscape and ecosystems in Romania are, and have been, made for local economic gain, their cumulative impacts are disrupting major ecological and physical systems to an extent detrimental to the economy and well being of the people. Loss of soil fertility reduces harvests and requires use of expensive chemicals; the application of which can further damage ecosystem health.

To build a stable economy, Romania must also have stable ecosystems. Fish production declines as wetlands are reduced, and as rivers and wetlands are increasingly engineered and become more polluted by agriculture and industry. Illicit and uncontrolled harvesting of timber, fruits and fungi from forests has long-term negative effects on ecosystem health. Plowing and grazing of steppe and draining of wetlands and wet meadows is detrimental to wildlife and wildland products that would otherwise have long-term economic benefits. Monocultural stocks of crops, advanced for increased food production, can result in a "simplified landscape", which is represented by far less biodiversity than before croplands were converted from the native landscape. This simplified landscape results in less resistance to disease, and can hinder the ability of the population to procure food, fiber, and fuel needs from the land. There is a serious need to thoroughly catalog and study the effects of these impacts on the country's economy.

**1.2. Habitat diversity.** As a consequence of its geographical setting, Romania is a country with unique and high biodiversity at level of ecosystems, species, and genetics. Natural and semi-natural ecosystems

cover **47%** of the country's area. Romanian ecologists define **758 terrestrial ecosystem types** within the complexes of these ecosystems, which are presented in Annex III. Perhaps a more unified measure of diversity is the habitat type, which is defined by dominant species populations rather than by the energetic relationships which define ecosystems. While ecosystem definitions can be somewhat arbitrary, habitat types have been defined by international scientific agreements. As a result of the studies by CORINE Biotope Program, **783 habitat types** were identified in **261 areas** throughout the country. Romanian habitats can be divided into the seven general biome types presented below. All of Romania's habitat types are listed in Annex IV.

Main habitat types	Number
Coastal	13
Wetland	89
Grassland	196
Wood	206
Marsh	54
Rock/Sand	90
Agriculture	135

The extensive range of ecosystem/habitat types in Romania is largely the result of the influence of climate and elevation. Of major importance affecting ecological conditions are Europe's Carpathian Mountains, **60%** of which are in Romania, and the Danube Delta, **75%** of which is in Romania. In total **17** major terrestrial ecosystems exist, including all of the major ecosystem types existing in Europe. There is also a rich diversity of aquatic ecosystems including the Black Sea, rivers, floodplains, glacial lakes, subterranean karst cavities, karst caves, coastal wetlands, bogs, and mountain rivers. While grasslands account for a large number of ecosystem types, they no longer cover a large amount of Romanian land due to encroachment by agricultural development. Among the **783** habitat types, **94** have been designated as special conservation areas, while **25** of these are priority habitat types (see Annex IV).

In the more humid regions at lower altitudes (up to **300 m**), broad-leaved forests are predominant. In the less humid climates there are steppe grasslands, and in between the two regions there is a zone of silvosteppe containing a mix of forests and grasslands. The elevation change brought about by the Carpathian Mountains brings an abundance of biogeographic zones which include four main types: nemoral (broad-leaved forests); boreal (primarily coniferous forests); subalpine (shrubby conifer, azalea, balackberry and others); and alpine (containing grasses, sedges, dwarf shrubs and a dwarf pine unique to the Carpathian Mountains).

Since almost half of all forests in Romania (**13%** of the country) have been managed for watershed conservation rather than production, Romania has one of the largest areas of undisturbed forest in Europe. The natural integrity of Romanian forest ecosystems is indicated by the presence of the full range of European forest fauna, including **40%** of all European brown bears **30%** of wolves, and **25-30%** of lynx. Europe's second largest wetland, the Danube Delta, also lies predominantly in Romania. Major grasslands, caves, and an extensive network of rivers, add to ecosystem richness.

**1.2.1. Woodlands and forests.** Today, a total of about **6,567,000 ha** of Romania (**27.65%** of the land area) is covered by forest. Of these, **6,161,000 ha** are actually wooded, the other **400,000 ha** being meadows, marshes, and ponds. Most of the forests are situated in the Carpathian Mountains. Conifers comprise **30.3%** of all Romanian wooded areas. Spruce (*Picea*) are the dominant coniferous species, represented at **22.5%** of all tree species, followed by fir (*Abies*) at **5.1%**. Deciduous trees are best represented by beech (*Fagus*), which are the dominant tree species in Romania at **30.4%**. Beech are followed by oak (*Quercus*) trees at **19.3%**. Various other hardwoods including maple (*Acer*), ash (*Fraxinus*), acacia (*Accacia*) and hornbeam (*Carpinus*) comprise **14.3%** of Romania's trees, and other softwoods including poplars (*Populus*) of European and American provenance and indigenous species such as alder (*Alnus*) and willows (*Salix*) make up **5.7%** of all tree species (see **Maps 2 and 3**).

**1.2.2. Wetlands.** The south region of Romania is dominated by an area of steppes, steppe woodlands, and termophilous oak forests interspersed with wetlands. This mosaic of wetlands is the main reservoir of biodiversity in the region but it is endangered by agricultural fertilization, application of pesticides, mechanization, and engineered drainage. These wetlands are remnants of an aged natural area, which hundreds of years ago connected the Carpathian and Balkan Mountain Ranges.

The alluvial zones of the Danube basin constitute a unique heritage, which is necessary to the river's life, to quantitative and qualitative maintenance of groundwater reserves, and consequently to the quality of drinking water. These alluvial wetlands zones are the richest natural regions in Europe in terms of biodiversity and biological productivity. The alluvial ecosystems are closely linked to the seasonally flooded areas of the Danube. Worldwide, these alluvial ecosystems play a crucial role in the physical and biological functioning of the great rivers and their regulation.

**1.2.3. Grasslands, Scrubs.** This complex category includes heathlands, which establish themselves after deforestation followed by extensive grazing, and other scrub-like formations resulting either naturally (through climatic and edaphic limitations) or from forest degradation. Grasslands are grass- or herb-dominated vegetation. Naturally occurring systems include alpine grasslands steppes. Semi-natural systems include calcareous grasslands, mat-grass sward on acidic soil, and humid or mesophile grasslands used as meadows. The latter two semi-natural systems are both being affected by human activities other than traditional harvesting, such as road building, industrial development, and urban sprawl.

**1.2.4. Bogs.** Romania is rich in bogs, with the more than **430** catalogued covering a surface of **7,000 ha**. These bogs produce rich topsoil and provide unique habitat for different species such as *Sphagnum* spp., *Drosera rotundifolia*, *Betula nana* and the glacial relics *Viola epipsila* and *Salix myrtilloides*. The most important are Poiana Stampei-Casoi (Suceava judet), Luci (Harghita judet), and Mohos-Tusnad Bai (Harghita judet). Others are located in Poiana Brazilor-Oas (Maramures judet), Gaina (Suceava judet), and the Apuseni Mountains (Cluj judet) (**Map 4**).

**1.2.5. Caves and cave ecosystems.** The karst (limestone with subterranean cavities) surface area of Romania covers **4,400 km<sup>2</sup>**. This puzzling geological structure is clearly displayed by a large variety of cave morphology and mineralogy. These karst areas were formed as uplift of limestone and other soluble rocks in the Carpathian Mountains exposed these rocks to surface and ground water that dissolved away channels and cavities. This process is known as karstification. An active tectonic event somehow isolated and gave individuality to the area's specific karst evolution. Romanian caves provide an invaluable record of quaternary geology in this part of the world. Today, more than **10,000** caves are known, **8,000** of which are located in the southwest. The longest cave in Romania is Pestera Vantului in the Padurea Craiului Mountains (**34 km**). Topolnita cave in the Mehedinti Plateau is **15 km** long and the cave from Zapodia in the Bihor Mountains measures **10.9 km**. The deepest cave is Tausoare cave in the Rodna Mountains with an elevation change of **465 m**.

Despite the poor conditions offered by the cold dark climate, life is flourishing in many Romanian caves. Where water persists in karst cavities, some **450** species of new invertebrates have been discovered, of which **356** are endemic. Some of these living fossils are good indicators of living and climatic changes during periods of glaciation. Bat diversity is also highly expressed in Romanian caves. Seven different bat species can be found, sometimes in colonies of thousands. Romania possesses many characteristics that make its caves unique, including:

- The only chemoautotrophic cave ecosystem in the world at Movile Cave. Organisms living in this cave metabolize hydrogen sulfide, a characteristic shared only with life in deep vents in the rift zones of the Atlantic and Pacific Oceans;
- the most numerous invertebrate group living in caves: **149** species (**60%** coleoptera);
- the biggest bat colony in a cave: about **100,000** at Sura Mare; and
- the cave creature at the highest altitude: **2441 m**, the Collembola *Paronychiurus*.

**1.2.6. Soils and agriculture.** Plains and agro-ecosystems represent more than **12,000,000 ha** (almost **50%** of the Romanian territory and **90%** of the plain areas), with **9,300,000 ha** being arable land. The main plant species used in agriculture are wheat, barley, corn, sunflower, potatoes, oat, hemp, and flax. The main ecosystems of agricultural areas are: grassy lands used for cereals, vegetables, hemp, flax; orchards of apple, peach, plum, and apricot are mainly in hilly areas, frequently associated with meadows; hay meadows, also used as pastures (see Annex V); and associations of bushes and shrubs.

The diversity of species related to agro-ecosystems comprises: **15** species of mammals; **20** species of birds; **15** species of reptiles; **3** species of amphibians; more than **6500** species of invertebrates; and **640** species of plants (**134** species of weeds). Of these, **7** animal species are threatened and **12** are

vulnerable. **Four** species of mammals, **4** species of birds, **10** species of reptiles and one species of amphibians have limited areas in Europe. From the economic point of view, the most important agricultural animals are *Lepus europaeus* (brown hare), *Phasianus colchicus* (pheasant), *Crex crex* (corncrake), *Otis tarda* (great bustard), *Perdix perdix* (gray partridge) and *Coturnix coturnix* (quail).

#### Protected areas localized in agriculture zones

Protected area	Judet	Surface (ha)
Zerind	Arad	2200
Valea Rosie	Bihor	1
Hanu Conachi	Galati	199
Fanetele Pui	Hunedoara	13
Fanetele Nucsoara	Hunedoara	10
Fanetele Valea lui David	Iasi	50
Dealul Vulpei-Botoaia	Neamt	2
Fanetele Bosanci-Ponoare	Suceava	24
Fanetele Bosanci-Frumoasa	Suceava	10
Lunca Poganisului	Timis	70
Fanetele Clujului-V. lui Craiu	Cluj	1
Fanetele Clujului-Coparsae	Cluj	1.5
Suetu	Cluj	9
Valu lui Traian	Constanta	5
Total		2596.5

**1.3. Species diversity.** Romania belongs, from the biogeographical point of view, to the temperate European region. Romania is a meeting point between eleven biogeographic regions - arctic, alpine, west and central European, pannonic, pontic, balkanic, submediterranean and even eastern colchic, Caucasian and turanic-iranian. The country's geographic position, in conjunction with topographic variation and the Danube Delta has resulted in a high level of biogeographic diversity. Romania's floral diversity includes over **3,700** species and its faunal diversity is estimated to include more than **33,800** species. These figures include a large number of endemic and subendemic plants (**228**) (Annexes VI A and B) and animals (**1,000**) (Annex VI C) specifically adapted to local conditions. The high habitat/ecosystems diversity reflects the high level of flora and fauna species diversity evident in **Map 5**.

During periods of glaciation most present day species could not have survived, therefore it is presumed that the origin of Romanian flora and fauna is predominantly post-glacial. Most species that could not subsist in Romania during periods of glaciation are immigrants from the so-called refuge climates in which they existed during glaciated periods. The refuge climates from which most current Romanian fauna are presumed to have migrated include Mediterranean, Manchurian, Syrian, Caspian, and others. In addition, the distribution of many of the terrestrial species found today is reflective these refuge climates. For example, the Mediterranean refuge species are spread over the moist beech forests (*Salamandra salamandra*, *Bufo bufo*) and the Syrian refuge species are living in dry habitats, oak forests and steppes (*Eryx jaculus*, *Pelobates syriacus*). A few terrestrial species were resistant to glaciation and were endemic. *Triturus montandoni*, some grasshoppers from the Cozia Mountains and some *Alopi* species (Gastropoda) from the Birsa Mountains are examples.

Romania's freshwater animals originate from the Danube River drainage basin and are pre-glacial. Some relic species, which originate from the ancient Sarmatic Sea (crustaceans misidacea and cumacea, some polychaetes and limnocoardiids mussels) can be found today in the Danube River, the Danube Delta and in Black Sea coastal lagoons.

The Danube drainage basin virtually covers Romania's entire land surface and comprises the richest ichthiofauna (fish diversity) of all other European rivers. The basin was less affected by glacial periods and receives many cold tributaries, which provide good habitat for some rheophilic (fast water loving) and psychrotermophilous (cold water loving) species including beluga sturgeon (*Huso huso*). While the majority of fish in the Danube are freshwater species, **23** fish species of marine origin also inhabit the Romanian sector of the Danube.

Interestingly, Romania is represented by a high diversity of groundwater fauna, the origin of which are fully pre-glacial. These organisms can be found living in subterranean water-filled karst cavities and in water bodies in above-ground caves. This life comprises many ancient species of crustaceans, such *Microcharon*, *Microcerberus*, *Stygasellus*, and the archiannelid *Troglochaetus*. Representatives of the only known terrestrial sulfanogenic organisms, which breathe sulfur in place of oxygen, are found in caves in Romania.

**1.3.1. Flora.** Of the **3,700** higher plant species catalogued in Romania, it has been identified that:

- **23** species have been declared as natural monuments;
- **74** species have disappeared from Romania;
- **39** species are endangered;
- **171** species are vulnerable; and
- **1253** are rare species.

Grassland species include **37%** of the total species represented. About **600** species of algae and a total of over **700** species of marine and coastal plants exist. A very high percentage of the plant species (**4%**) are endemic. In total there are **57** endemic taxa (species and subspecies) and **171** sub-endemic taxa (with their territory mostly in Romania).

**1.3.2. Fauna.** Of the close to **33,900** animal species catalogued more than **33,000** are invertebrates and **795** are vertebrates. Romanian vertebrates comprise:

- **211** species of fish, of which **17** are endangered, including all native sturgeons (*Huso huso*–Beluga sturgeon; *Acipenser nudiventris*–Ship sturgeon; *Acipenser ruthenus*–Sterlet; *Acipenser sturio*–Common sturgeon; *Gobio antipai*–Danube gudgeon; *Hucho hucho*–Danube salmon; *Carassius carassius*–crucian carp; *Chalcarburnus chalcoides*–mentó; *Cyprinus carpio*–common carp; *Gasterosteus aculeatus crenobiontus*–goldstickback; *Thymallus thymallus*–grayling; *Romanichthys valsanicola*)
- **20** amphibian species, of which **3** are endangered (*Triturus dobrogicus*–Danube crested newt; *Pelobates syriacus*–eastern spadefoot; *Rana arvalis*–moor frog)
- **23** species of reptiles, of which **9** are endangered (*Testudo hermanni hermanni*; *Testudo graeca iberica*; *Lacerta praticola*; *Lacerta trilineata*; *Eremias arguta deserti*; *Ablepharus kitaibelli*; *Elaphe quatorlineata*; *Vipera ursinii renardi*; *Eryx jaculus*)
- **439** species of birds (nesting, migratory and accidentally birds), of which **29** are endangered (see Annex VI C for a listing of endangered birds)
- **102** species of mammals, of which not more than **10** are endangered (including *Monachus monachus*; *Tursiops truncatus*; *Phocoena phocoena*; *Delphinus delphis*)

**1.3.2.1. Migratory birds.** Romania is a critical transit area for birds migrating within Europe. The country is crossed by bird populations that are mainly migrating from Europe and Eurasia to the Mediterranean and Africa around the eastern part of the Mediterranean Sea. The main migratory flyway of Romania is in the east between the Carpathian Mountains and the Black Sea. This zone forms a natural corridor for migration with a mountainous barrier to the west and a large water body to the east, thereby funneling birds' migrations south through Romania in autumn. Among the many hundreds of species which migrate through this zone, highlights include endangered species such as the Red-Breasted Goose (*Branta ruficollis*), White and Mute Swans (*Cygnus cygnus* and *C. olor*), the Black Stork (*Ciconia nigra*), Dalmatian and European White Pelicans (*Pelecanus crispus* and *P. onocrotalus*), the White-tailed Eagle (*Haliaeetus albicilla*), and the Glossy Ibis (*Plegadis falcinellus*). The migrating birds rely heavily on food resources available in the Danube Delta for refueling stopovers during their journey.

A second, less utilized migratory flyway crosses through Romania's West Plain, which is part of the larger Tisa Plain shared with Hungary and Serbia. A lateral branch runs along the Danube River from east to west. This route is used by Crane (*Grus grus*) and Passeriformes (perching birds). A third flyway crosses the Transsylvania basin, from northwest to southwest.

In the autumn, Romania is crossed by bird populations from:

- central-northern Europe flying primarily in a south-east direction;
- eastern Europe (Russia, western Siberia) flying in a southwest direction to winter in the Balkans or on the Italian Peninsula; and
- unspecific directions migrating through Romania (including local elevation-related events).

The return migration in the spring is almost the same, except for a few species that have a slightly modified return route around the east coast of the Black Sea.

**1.3.2.2. Conservation of Large Carnivores.** Regarding large carnivores, Romania is unique in the world. The greatest densities of wolf, lynx, and brown bear in Europe are found here. Actual populations appear to exceed statistical estimates by a factor of two or more, suggesting that habitat in Romania is much richer than in neighboring countries. This phenomenon is attributable to the vast tracts of remaining forests in the Carpathian Mountains, whose stands of trees possess great coverage density and are highly interconnected. It is also due to other factors, including steep, inaccessible slopes, low road density, and a comprehensive game management policy that promotes conservation.

The fact that large carnivores persist so well in Romania indicates that there are few problems with natural forest regeneration or with the health of wildlife populations on which these predators subsist. This forms a strong argument in favor of the ecological role of great predators in the forest ecosystem, and is a compelling reason to focus strong conservation efforts on the forests and the populations of these predators.

**The wolf** (*Canis lupus*). Up until 1970, Romanian policy was aimed at reducing wolf populations throughout the country. The wolf population was particularly affected in the southern and eastern plains areas due to agricultural development and hunting practices, which completely extirpated wolves in these areas. From **1970** to **1990** government policy changes resulted in a decrease in the amount of hunting in general in Romania. Populations of both wolves and their main prey (namely deer and wild boar) increased to high levels, but wolves' ranges remained restricted to the forests. In **1991** government policy again changed in favor of hunting. The interest in wolf hunting, however, has been moderate so the wolf population has not been significantly affected. At the end of the 1990's the wolf population was estimated at **3,000** and is expected to increase.

Although all three top-level carnivores in Romania are situated in the peak of the trophic pyramid, the wolf plays the most important role in preserving equilibrium in the forests. Because wolf populations have remained well established in Romania, ecosystem equilibrium has been relatively well conserved. This equilibrium has not allowed an explosion of herbivorous species nor the resultant damages that follow such a phenomenon. The wolf also provides for natural selection against large herbivores. By killing sick and old individuals, the wolf has been the main factor keeping deer and wild boar populations in good health.

**The jackal** (*Canis aureus*). The disappearance of wolves in the plains in the south and east of Romania has created an ecological niche that has offered the possibility of the jackal to extend its range into Romania. The jackal began to appear when wolf populations were lowest, between **1965-1970**. Today jackals have small stable populations in eastern Romania in the Dobrogea forests and near Lake Razelm, in the southern Danube Delta. So far jackals do not coexist with wolves or feral dogs..

**The lynx** (*Lynx lynx*). The Eurasian lynx is one of the widest ranging of all cat species. Lynx were once found throughout Russia, central Asia, and Europe, and may have lived in Britain close to **1,800 years** ago. Due to human activities, the lynx reached its minimum numbers in the **1950s**. Today the lynx has a continuous population in Nordic countries and small scattered populations in central and western Europe. There are about **7,000** Eurasian lynx left in Europe.

The lynx's disappearance in lowland Europe was due to human persecution, deforestation, expansion of agriculture, an increase in human populations, and a decrease in wild prey. Although the lynx is not endangered, these threats still affect it today all over Europe. Habitat loss and the loss of a prey base due to logging and human population pressures could devastate this elusive animal. Humans are still a major threat to the lynx, particularly small lynx populations, or populations of reintroduced animals. These groups can be devastated by losses due to traffic accidents, or by unsustainable hunting and poaching. In Norway last year, licensed hunters killed **117** lynxes out of a total population of only **500-600**. This type of hunting may be unsustainable, particularly when compounded by illegal hunting. More knowledge of population densities and dynamics is needed, especially in areas where governments allow controlled lynx hunting to take place. Farmers need to be made aware of the facts surrounding lynx biology and predation in order to make informed decisions about hunting.

The lynx has a strong and vigorous population in Romania, estimated at **1800-2000** individuals in **2000**. Very often individuals over 30 kg have been discovered in the Romanian Carpathians. Habitat is limited to

large forests in the hills and mountains. Usually roe deer is the main prey species for lynx, but rarely it preys on red deer females and chamois. To hunt lynx in Romania, an individual hunting license is required and the number allowed to be taken each year is strictly controlled.

**The brown bear (*Ursus arctos*).** The brown bear is the most widespread bear in the world and can be found in Europe, Asia and North America. Increasing human populations have squeezed brown bears out of many parts of their former range in southern Europe. Today Europe has **14,000** brown bears. The two main bear populations in Europe are in the Carpathian Mountains and in northeastern Europe where there is a continuous population from the Urals to the West Coast of Finland. Some relict brown bear populations are precariously small and highly fragmented in southern, central, and western Europe. However, the Romanian brown bear population is vigorous and stable at **5,600** individuals as of 2000.

The continued survival of the brown bear in Romania is threatened by many different factors. Public attitudes are generally negative towards bears, due in part to fear of attack. As human populations expand, bears lose their habitat and food sources, resulting in predation on livestock, especially sheep and goats. Bears also take unguarded livestock even where there is abundant food. Bears are known to visit landfills and waste bins which increases contact with humans and thus the likelihood of conflict. Habitat fragmentation due to roads and deforestation not only leads to traffic casualties but also isolates populations, which can lead to local extinctions. In some areas, poachers kill cubs to the detriment of local bear populations.

Although spread throughout the Romanian Carpathian Mountains, bear populations are highest in hunting areas managed by National Forest Regie. In conjunction with the rich forest habitat, Romanian hunting management has been able to conserve and develop the largest bear density in Europe. In addition, the population density and body size are among the largest in the world. The bear is a protected species in Romania, but in areas where it is present at high density and damages are recorded, the Ministry of Waters and Environmental Protection approves limited hunting permits.

#### **1.3.2.3. Other fauna with Conservation Status**

**Wild boar (*Sus scrofa*)** is a very adaptive species. Its habitat extends to the alpine zone during summer and it searches for food in the deciduous forests during autumn. The wild boar is common from the Danube Delta to the alpine zone wherever it can find food and shelter. The biggest densities are reached in hilly areas and meadows. The hunting season is August 1-February 15 for males and August 1-January 31 for females.

**Chamois (*Rupicapra rupicapra*)** can be found throughout mountainous Romania, but the main population is in the Southern Carpathians. Chamois were heavily hunted and populations had significantly diminished by the 1970's. Due to the reintroduction actions taken by National Forest Regie, strong populations of chamois now inhabit almost every suitable area in Romania. On the peaks of the mountains and in alpine openings, solitary bucks or herds ruled by old females are found. In the rutting period strong males defend their territories and secure mates through aggressive fights with rivals. Chamois hunting is controlled by expensive special permits that only allow a small number of individuals to be taken each year.

**Red deer (*Cervus elaphus*)** was a common species in the Romanian lowlands when forests covered plains and hilly areas around mountains. Deforestation associated with the development of human activities and hunting forced the red deer to retreat into the mountains. Due to protective measures the population consolidated in mountainous areas and started to expand and inhabit contiguous areas. At present, red deer populations have expanded out of the Carpathians to limited stands of remaining hill and plain forests. The Romanian red deer outsizes its counterparts in western Europe. The median weight of a Romanian stag is **250 kg**. The hunting season is September 1-December 15 for bucks, and September 1-February 15 for hinds (mature females) and calves. A permit is required which specifies the sex and age of the animal to be taken. Sizable fines are sanctioned for taking specimens not listed on the permit, or for hunting out of season.

**Roe deer (*Capreolus capreolus*).** As was the case with the red deer, the roe deer was also once extirpated from the plains and hilly forests. However, due to a high reproductive rate and revised hunting policy, the roe deer now inhabits the entire country. The hunting season is May 15-September 15 for bucks and September 1-February 28 for selection. A permit is required which specifies the sex and age

of the animal to be taken. Again, sizable fines are sanctioned for taking specimens not listed on the permit, or for hunting out of season.

**1.3.2.4. Fishing.** The National Forest Regie also manages mountain river aquatic fauna, administrating **18,192 km** of rivers and **12,068 ha** of lakes. The main fish species are: brown trout (*Salmo trutta fario*), lake trout (*Salmo trutta lacustris*), rainbow trout (*Salmo gairdneri*), brook trout (*Salvelinus fontinalis*), srayling (*Thymallus thymallus*), and huchen salmon (*Hucho hucho*)- an endemic species of the Danube drainage basin which is very rare and can be fished only with approval of the Ministry of Waters and Environmental Protection).

In 1967, **103** fish species were recorded in the Danube as compared with **40** and **61** for the Rhone and Rhine rivers, respectively. This taxonomic richness can be related to the number of endemic species and to the remaining high diversity of floodplain biotopes.

**1.4. Hydrographic network.** Romania has a total of **66,029 km** of waterways, measuring **237,500 km<sup>2</sup>** in area. There are **4,295** in total, of which **4,000** have a drainage basin greater than **10 km<sup>2</sup>**. The average density of the hydrographic network is **0.49 km/km<sup>2</sup>**. There are **3,450** natural ponds and lakes with a total water surface area of **2,620 km<sup>2</sup>**, representing **1.1%** of the country's area. This, plus the surface area of the rivers gives a total water surface of **8,048 km<sup>2</sup>** (or 3.38% of the country's total area) (see **Map 6**).

Superficially, Romania's water resources appear plentiful. However, the internal waterways have a flow of only **37 billion m<sup>3</sup>/year**, except when flow is being controlled through dams (the flow being **6 billion m<sup>3</sup>/year** when not regulated). Related to the total population of **22,940,430 inhabitants**, this gives a per capita distribution of **1,700 m<sup>3</sup>/year**, indicating that Romania is actually poor in water resources. This rich hydrological network contributes significantly to Romania's biodiversity. Over **1,000 km** of the Danube River and numerous tributaries flow through Romania. Where the river empties into the Black Sea the **580,000 ha** Danube Delta (**113,000 ha** permanently covered by water) has been formed, which is the largest delta in Europe. Romania also has a large portion of Black Sea coast (**228 km**) and associated sand dune and coastal ecosystems. Of all Romanian ecosystems, none presents such a high level of biodiversity as the Danube River system, most specifically, the Danube Delta.

The Lower Danube River System is located along both sides of the last **1,080 km** of the Danube River. The respective complexes of the following nine hydrogeomorphologic units are strongly connected through longitudinal and lateral hydrological gradients:

1. The area between the Iron Gates Lakes located **1,080 km** upriver and Calafat City (**840 km**).
2. The upstream floodplain, located between Calafat and Calarasi (**365 km**), with a surface of **2,220 km<sup>2</sup>**. This area includes such ecological components as the Danube channel, numerous islands, riparian systems (lateral flooding areas), and diked areas;
3. The inner Danube Delta, located along the Danube River between Calarasi (**365 km**) and Braila (**170 km**) and between the southern Romanian plain and the Dobrogean Plateau covering a total area of **2,413 km<sup>2</sup>**. It has as its main components the Small and Big Islands of Braila (**876 km<sup>2</sup>**), Borcea Island (**801 km<sup>2</sup>**), and lateral flooding areas (**736 km<sup>2</sup>**), most of which are currently diked;
4. The downstream floodplain, including the river stretch between Braila (**170 km**) and Ismail Ceatal\* (**78 km**) and associated flooding areas covering a total area of **701 km<sup>2</sup>**. (\*Where the Danube bifurcates into the Chilia arm to the north border of Romania and Ukraine, and the Tulcea arm to the south).

The next three complexes of ecosystems form together what is called the "Coastal Danube River Delta" with a total surface of **4,178 km<sup>2</sup>**:

5. The core Danube Delta, having a spatial distribution between the Chilia arm to the north and Saint Gheorghe arm to the south, and between Ceatal Ismail to the west and the Black Sea to the east, with a total surface of **2,570 km<sup>2</sup>**.
6. The secondary Chilia in the extreme northeastern part of coastal Delta which has undergone active development for over four centuries. It covers an area of **732 km<sup>2</sup>** and is situated in Ukraine.
7. The Dranov floodplain complex covering **876 km<sup>2</sup>** in the southeastern corner of the Danube Delta. The northern Dobrogean hills and Razim Lagoon Lake form its border to the west, while the Black Sea forms its eastern border.

The remaining two hydrogeomorphologic units in the system are not directly connected with the Danube River drainage basin:



**8.** The Razim-Sinoe lagoon complex is situated to the south of the coastal delta and has a total area estimated at **1,015 km<sup>2</sup>**. In this area limans, or flooded valleys, and lagoons extend over **863 km<sup>2</sup>**. This complex consists mainly of basins that were originally marine bays, but became isolated from the sea by the deposition and eastward drift of sediments from the mouth of the Danube River. This area was isolated over **1,500 years** ago as part of the seaward advance of the coastal delta over the past **3,000 years**.

**9.** The Coastal Black Sea region, extending out to an isoline of **20m** in depth covering **1,025 km<sup>2</sup>**. Such ecological components as bays, shallow and deep aquatic systems, and islands are represented this area.

The current geomorphology of the coastal delta is the result of long-term interaction between the Danube River and the northwestern part of the Black Sea during the Holocene period, beginning some **16,000** years ago. At that time, sea level was about **9 m** higher than today and the river formed an estuary with a single channel. Subsequently, the level of the Black Sea dropped, and sediments from the river formed a series of sandbars, channels and lagoons. This process split the estuary into the three channels, which formed the Delta. This process continues up to the present day and the Delta and Romania's coastline are constantly changing. Currently, about **79%** of the coastal delta is at or above mean sea level.

## Threats to Romanian Biodiversity

Although Romania is rich in biodiversity (particularly the large number and quality of valuable ecosystems and the quantity of some species) the country has suffered a progressive loss of biodiversity as a result of human activity. In particular, agriculture, industrial development, transportation and the expansion of cities have profoundly affected biological diversity, both generally and locally. Pollution, alteration of river courses, hydrotechnical works (e.g. hydroelectrical dams), urban sprawl, resource extraction, and overexploitation of natural resources have been the principal factors involved. In order to ensure that existing diversity is conserved for the future, it is imperative that controllable loss of biodiversity be stopped and reversed.

**2.1. Environmental Degradation.** Air, water, and soil pollution have been, and continue to be, major threats to biodiversity in Romania. Following **1989**, industrial pollution decreased in the first years of the economic transition process due to significant reductions in industrial output. However, it can be expected that as the Romanian economy begins to grow, industrial pollution of air, water and soil will begin to rise again unless policy changes requiring new manufacturing processes and/or the installation of pollution control equipment are adopted and enforced. Major impacts to aquatic biodiversity include discharges of untreated or partially-treated human sewage, unpermitted industrial effluents, mining wastes, thermally disruptive effluents due to industrial cooling, and runoff of misapplied agricultural fertilizers, insecticides, herbicides and fungicides.

Many of Romania's interior waters, which should sustain a rich biological diversity, are now polluted to the degree they cannot. Not all of this is attributable to Romania, however. The Danube, which runs through ten countries and four capital cities before arriving in Romania, carries pollution, which already has had a negative impact upon the river's biological diversity. Locally, this effect is compounded by urban, industrial, and agricultural activities in Romania and Bulgaria. The effects of human pollution are apparent all the way along the course of the river, throughout the Delta, and in the Black Sea. The high nutrient load of the Danube River has caused blooms in algal growth, which have depleted Oxygen, resulting in eutrophication in many Danube Delta lakes. Macrophyte, mollusks, benthic and fish species have consequently been reduced. This is particularly damaging to fish populations but also to the marine mammals that feed on them.

A particularly extreme example of industrial pollution attributable to Romania is the coal washing operation undertaken in various locations along the Jiu River in south central Romania. Coal, which is mined for the steel making and energy industries, is prepared by washing impurities from it and discharging the process water directly into the Jiu. The process water is so loaded with sediments that the river, which runs over **15 m** wide at points, is discolored to a deep slate gray. It is reported that fishes and invertebrates are virtually non-existent in the river due to this pollution.

Poor agricultural practices have resulted in significant environmental degradation. Pollution with petroleum and salt water is adversely affecting **49,500 ha** of agriculture land. Pesticides, fertilizers, soil settling, salinization and habitat fragmentation have decreased the diversity of soil invertebrates by more than **30%**. Estimates are that about **40%** of Romania's agricultural area is affected by erosion with an average rate of **16.5 t/ha/yr**. Overgrazing in some areas is also reducing soil resources (e.g. contribution to erosion, especially on slopes). Grazing of sheep in alpine regions has contributed to the decline of dwarf pine (Figure 1A), which in turn has resulted in the decline of the capacity of these alpine soils to retain water, a crucial factor in minimizing downstream flooding threats.

Roughly 6,875,000 tons of pollutants, including alluvia, organic matter,  $\text{NH}_4$ ,  $\text{NH}_3$ , associates, phenols,  $\text{H}_2\text{S}$ , P, CN, detergents and pesticides are spilled annually into Romania's waterways. These eventually find their way into the Danube Delta and Black Sea and contaminate the delta and Romania's Black Sea coastline. In addition, 415,000 tons of  $\text{CBO}_5$ , 487,000 tons of  $\text{CCO-Mn}$ , 106,000 tons of ammonia and 4,500 tons of phenols are spilled in the natural waterways.

Of the 70,000km total length of rivers, 20,000km are so contaminated by toxic substances as to be considered unfit for agricultural or human use. Over 2,800km are devoid of all plant and animal life.

Water used for irrigation of 200,000ha of agricultural land falls short of prescribed quality conditions. Monitoring of these 20,000km of rivers has indicated that:

- 7800 km (39% of the waterways investigated) are classified Quality Category I (low pollution levels);
- 6100 km (30,5%) are classified Quality Category II (medium pollution levels);
- 2400 km (12%) are Quality Category III (high pollution levels);
- 3700 km (18,5%) are Quality Category IV totally polluted.

The four water quality categories are based upon is a measurements of carbon and oxygen concentration as well as microbial colonies (Figure 1B).

By catchment areas, the percentage of degraded waterways looks as follows: Lalomita basin: 51%; Olt basin: 30%; Siret basin: 29%; Vedea basin: 23%; Arges basin: 22%. The degradation is due mainly to the discharge of insufficiently treated or untreated effluent oil and petroleum residues and eutrophication from agricultural fertilizers. Industry is the largest user of water, consuming over 40% of supplied water. Agriculture is also a large user, consuming over 35% (this includes irrigation, stock-rearing and fish-farming).

Before 1945, out of 147 existing towns, only 56 had a sewage treatment system and only eight possessed a purification station. Today, of Romania's 262 towns, approximately 220 have a sewage treatment system, but only 100 have purification stations, of which more than 30% are malfunctioning. The problem is much more serious with regard to purification stations for industrial effluents: of 3,500 known polluting industrial units, over half do not have purification stations or do not have sufficient capacity for the filtration of the effluent.

In grasslands there has been a continuous deterioration due to the number of grazing animals without a consideration of carrying capacity or organization of grazing cycles and rotations. Destruction of alpine forests to create meadows for the grazing of sheep has resulted in forest fragmentation, erosion and watershed capacity reduction. Overexploitation of peat in some boreal habitats has also resulted in some damages to alpine ecosystems.

**2.2. Engineering of Waterways.** In addition to pollution, among the most significant changes to aquatic ecology that have taken place in Romania have been alterations to the courses of rivers and the building of hydrotechnical works. In most instances these actions have had major negative consequences for aquatic biocoenoses (relationships within biological communities) and have caused the loss of natural ecosystems and terrestrial habitats, as well as the loss of ecological equilibrium of these ecosystems on a large scale.

**2.2.1. Channelization.** Of all the factors that have reduced the natural heritage of the Danube, probably none is more significant than channelization. In a one hundred and fifty-year period the Danube has lost major portions of its tributaries and backwaters, which were once composed of an extensive network of channels. By confining the river to a narrow deep channel, scouring faster moving water reaches the delta more quickly, thereby reducing the amount of water that used to reach the side channels of the river thereby virtually eliminating seasonal floods. This has greatly affected floodplain areas, which are now much dryer and are irrepresentative of their former ecological diversity

**2.2.2. Damming.** Between **1950** and **1980** a total **69 dams** (two in Romania, bridging Romania and Serbia) were constructed on the Danube. Beginning with its headwaters in Germany, there are **58 dams** along the first **1000 km** of the Danube. As a result one of the largest remaining flood plain forests along this stretch of the river is slowly dying due to the lowering of the water table and reduced seasonal flooding.

Other effects of damming include changes in the hydrodynamic cycle and interruption of the flow of subsurface waters. The loss of groundwater as a result of hydrotechnical works has, for example, produced the partial or total drying out of about **20,000 ha** of forests.

### Example: The Effects of the Iron Gates Dam on Biodiversity and Agriculture

The Iron Gates Dam and Reservoir on the Danube River, on the border of Serbia, is a particularly poignant illustration of the large-scale ecologically disruptive effects of the damming of the Danube. The following four large-scale side effects are directly attributable to the Iron Gates Dam:

First, the dam has interrupted the migratory routes of anadromous fishes, most notably the beluga sturgeon. Interruption of these routes has disrupted breeding, and has resulted in part in the systematic decline of this species. Commercial fisheries, once thriving, are now defunct. In addition to providing habitat for non-native species (especially game fishes), dams and reservoirs impact aquatic biodiversity by isolating populations and disrupting genetic flow.

Second, alterations in the flow and elevation of the river resulted in the extirpation of large mayfly larvae, on which the sterlet (*Accipenser stellatus*) primarily subsisted. This larvae (*Palingenia laugicauda*) would feed and burrow in the moist banks of the Danube during the spring when the Danube would run high due to snowmelt upstream. During this period, the larvae would get exceptionally large, forming one of the main food resources for sterlet. As the Iron Gates Dam regulates the flow of water in the river in response to human electricity needs, and because the Danube had been channelized to promote shipping traffic, seasonal flooding no longer occurred, and water was not retained in lower reaches of the river. Because the riverbanks no longer remained inundated, the larval burrowing sites dried up. The destruction of these larvae's habitat resulted in the local extinction of the insect species in the Danube thereby contributing to the virtual elimination of the sterlet.

A third effect of the dam is related to the second. In response to fluctuating water levels and channelization, as the banks of the river and shores of islands in the river dried up, forested areas which had evolved in response to these seasonal large-scale slow river level changes could not cope with the rapid, small-scale changes, and thus died out entirely (some forests remain on the islands).

A fourth scientifically observed result of damming the Danube is the reduction of the productivity of croplands in an area of the Romanian plain named Baragan. In this area, the Danube is approximately **1km** wide in spots, and is abundant with forested islands. This region is named Baragan for the following precipitation effect. In summer, hot, dry northerly winds cross the Danube into the Baragan region. Forests (also described in the third effect above) on the banks of, and on islands within, the Danube, transpire moisture from the river into the hot, dry air as it passes over. As the now moisture laden air passes over cool standing water bodies adjacent to the forests (also attributable to the seasonal flooding of the Danube), the air changes temperature. This in turn causes condensation of the moisture in the air. By the time the condensation has reached the precipitation point, the air has moved beyond the standing water areas, and falls onto croplands. The result of the changing water levels disrupted the forests, killing off large stands. Drying out the standing water areas exacerbated this effect. Loss of forest and standing water have thus resulted in a net loss transpiration, condensation and thus, of precipitation for agriculture (not to mention the pre-existing biodiversity of the area), which in turn has significantly reduced crop yields. Precipitation has been reduced from an average **320mm/yr** prior to the damming, to an average of **250mm/yr** today.

Building of dams on the Danube drainage basin has reduced the sediment load to the Black Sea coast and caused the partial loss of some *psamophyllous* (sand loving species) habitats. Reservoirs associated with dams in other areas have reduced forest and grasslands surfaces by about **140,000 ha**.

**2.3. Wetlands.** Draining wetlands for agriculture often produces unsuccessful farmland while destroying the wetlands. The draining of wetlands throughout the country was promoted by the government prior to **1990** in order to create arable land for agriculture. This practice led to the loss of approximately **400,000 ha** of floodplains, particularly along the Danube river and in the Danube Delta (**80,000 ha**). The embanking of the Danube and the building of the Iron Gates Dam has also had a major impact in destroying wetland spawning areas and the breeding success of many fish species. Together with pollution this factor has led to a reduction of sturgeon harvest (**50** times lower than previously reported) and carp (**10** times lower than previously reported).

**Example: IUCN Vulnerable, Threatened and Endangered Species in the Danube Delta Biosphere Reserve (DDBR)**

**Mammals.** On the DDBR territory, as well as in all of Europe, more than half of all mammalian species are vulnerable. There are no endemic species in the area.

**Birds.** 315 species have been recorded in the DDBR and only 10 are not included in the IUCN Red List: this large number (even there are many species not really threatened at the moment in DDBR) is because migratory birds have been protected by international conventions.

**Reptiles.** All reptiles are protected in Europe by Bern Convention. While 7 of the 11 species recorded in the Danube Delta are considered to be vulnerable, they are all included on the IUCN Red List because they are protected by international conventions.

**Amphibians.** All 10 species of amphibians living in the DDBR territory are considered to be vulnerable in the Central and Western Europe, and are included on the IUCN Red List because they are protected by international conventions. None are considered to be threatened within the DDBR.

**Fishes.** Of the 84 freshwater and eurihaline species inventoried, 59 species are vulnerable.

**Insects.** More than 2200 species have been recorded in recent years; 11 species are on the IUCN Red List.

**Mollusks.** Of the 15 species recorded in the DDBR, 4 are endemic and 6 are subendemic species. Nine species are considered locally vulnerable.

**Vascular plants.** From a total number of 927 species and subspecies once recorded in the DDBR, 900 are still present, of which 378 are included in the Red List. From the total of 4 European threatened species (Bern Convention) only 2 are endangered on the Territory of DDBR (*Marsilea quadrifolia* and *Aldrovanda vesiculosa*). Two endemic species (*Centaurea jankae* and *Centaurea pontica*) are endangered.

**2.4. Forests.** The Romanian government has been estimated that in the last fifty years, there has been a permanent loss of **250,000 ha** of forest and grassland ecosystems and that an additional **280,000 ha** have been temporarily or partially lost (see Figure 2A). Since **1989**, given the economic difficulties experienced by many Romanians, the tendency has been to exploit the natural resources as much as possible in order to generate quick incomes. There has therefore been considerable illegal extraction and gathering of forest resources, such as the cutting of small fir trees, the collection of mushrooms, medicinal herbs, and aquatic animals, and poaching. This has the effect of reducing viability of the species collected, and promotes an uncompetitive advantage for species not collected.

Introducing foreign varieties of trees to the floodplain forests and clear-cutting for agriculture and industry eliminates undergrowth and alters the function of the floodplain ecosystem. Alarmingly, forests older than 250 years are extremely rare in Europe. Forest management practices in Romania have not always been highly sensitive to protection and sustainable use of biological resources. In particular the overexploitation of wood in some areas, the selective extraction of economical (and ecologically) important trees, and the introduction of non-native species (Douglas fir and Austrian pine) have negatively impacted biodiversity. It is generally accepted that these practices have reduced the quality of biodiversity on about **1,000,000 ha** of land. Forest fragmentation and other threats (Figure 2B) has effects on timber and other flora, but also has devastating effects on large carnivores, especially lynx.

**2.5. Poaching.** In order to realize immediate economic gain, following the change in government in 1989, many Romanians took to poaching fish and wildlife. Furs of bears, lynx, and wolf bring significant returns on the illegal species trade market. Chamois in the Rodna mountains are now threatened with disappearance as a result of poaching and the impact of poaching on sturgeon species is considered significant in the continuing population decline (among numerous other effects described above).

**2.6. Mining.** Surface mining operations (brown coal in the north of Oltenia, sulphur in the Calimani Mountains, and bituminous shale in Banat) have caused irreparable damage to some important forest and grassland habitat.

The use of heavy metals in gold mining, including Arsenic and cyanides, has caused significant damage to natural ecosystems. Of particular significance, on **January 30, 2000**, unable to withstand the pressure

of rain and melting snow, a tailings lagoon at the Baia Mare (Big Mine) gold reprocessing plant overflowed and its retaining wall broke. Over **100,000 cubic meters** of cyanide and heavy metal contaminated waste water spilled out through the **25 m** wide break and into the Lapus River. After the toxins flowed into the Somes, Tisza, and finally the Danube Rivers, over **200 tons** of dead fish including carp, zander, pike, perch, wels (a cat fish), and sterlet (a species of sturgeon) had to be hauled from the river. The affects of this release have been widespread, with cyanide-contaminated dam tailings spread all the way to the Danube Delta. Numerous other mine sites, each of which is contaminated to varying degrees, persist throughout this region.

### Romanian Biodiversity Conservation Efforts

A comprehensive working system for the conservation of biological diversity is not in place in Romania. Government is pressured by EU accession concerns, by international NGOs and bilateral donors, and increasingly, by local NGOs. Various Ministries have proposed comprehensive laws, many of which have been promulgated by Parliament and signed by the President into law. A great number of wild species and natural habitats are the subject of the research programs and projects developed by universities, museums, research institutes and non-governmental specialized organizations.

The net effect of these actions has caused some progress in biodiversity conservation, and, more broadly, environmental protection. However, for the most part, the complex structure of law and confusing, overlapping authorities of various Ministries has caused great confusion. Noncompliance with laws, widespread corruption and lack of enforcement are hampering environmental progress, but Romania is gaining some headway. The country has set aside a good deal of land in protected areas. It is making strides in controlling water and air pollution, and has begun afforestation and reforestation efforts.

**3.1. Protected areas.** As of **2001**, Romania has designated **827** protected areas, covering **5.18%** of the country's area in accordance with the rules of International Union for Conservation of Nature (IUCN). These areas were identified by studies carried out by Romanian research institutes under the advisement of the Romanian Academy. Protected areas include three biosphere reserves, national parks, natural areas, national monuments and strictly protected scientific reserves (Annex VII; **Map 7**).

**The Danube Delta Biosphere Reserve (DDBR)** has a total area of **5,800 km<sup>2</sup>** (**2.5%** of the total territory of Romania), which makes it the **22<sup>nd</sup>** largest protected area in the world and the **3<sup>rd</sup>** largest in Europe. It contains the greatest reedbed expanse worldwide and one of the worlds' largest wet habitat zones. Importantly, as compared to other world deltas, only the Danube Delta has been declared as a UNESCO MAB Biosphere reserve. DDBR includes **32** types of ecosystems and represents a natural genetic warehouse. Within this larger complex, **18** areas with a surface of **50,600 hectares** (**8.7%** of the total DDBR) are totally protected and **13** areas with a surface of **223,000 hectares** are buffer zones. The Delta is controlled by three international statutes (Biosphere Reserve, Ramsar Site and Site of World Natural and Cultural Heritage, which have been incorporated into Romanian law.

**Retezat National Park**, located in the western part of Romania, is the oldest national park, being established by law in **1935**. The park has a surface of **38,047 ha**, of which **1,800 ha** have been declared a strictly protected scientific reserve area called "Gemenele". The universal value of the park was recognized by the Man and Biosphere Program (MAB) of UNESCO in **1979** through its inclusion in the international network of biosphere reserves. In the lower part of the park there are deep narrow valleys, while the higher parts consist of glacial plateau with more than **80** glacial lakes. The largest single area of pristine mixed forest in Europe covers the lower levels of the strictly protected area. The vegetation is rich, and because of its location between different vegetation zones, endemic plant species comprise **5.2 %** of all flora. Among them *Draba dorneri*, which can be found only on a small area. The Retezat Mountains are considered to be the European genetic center for *Poa* and *Hieracium*. Viable populations of large mammals, including brown bears, wolves, lynx, wildcat, wild boar, roe and red deer, and chamois populate the area, together with a large number of small carnivores including at least 8 species of mustelids (badger, otter, etc.).

**Rodna National Park** represents the largest protected area located in the northern group of the Eastern Carpathians covering a surface of **46,399 ha**. In **1980** it was declared a Biosphere Reserve under UNESCO - MAB Program. The massif is dominated by metamorphic formations belonging to Precambrian or Paleozoic periods with slopes reaching **20 - 35°**. The karst from the northern part of Rodnei Mountains is one of among the few places in the Romanian Carpathians where typical exokarstic forms appear, which confer uniqueness to the landscape here. The flora is significant because of the presence of both local and Carpathian endemic species together with glacier relics. The vertebrate fauna is extremely variable including large birds, such as black grouse, capercaillie and eagles, as well as large

carnivores such as lynx, brown bears, and wolves. Inside the park there are nine reserves (IUCN category I and IV) and one natural monument.

**Piatra Craiului.** Considered an accident in the geography of the central Carpathians, this steeply sloped, lowly vegetated limestone mountainous ridge rises in the middle of a plain. This rocky protrusion is unique among neighboring mountains, which consist of dense forest and meadows. Around this rocky ridge, Piatra Craiului Natural Park includes approximately **15,000 ha** of pristine mixed and coniferous forest and alpine ecosystems, surrounded by traditional landscapes that together support viable population of large carnivores including bears, wolves, and lynx. Nearby, the village of Magura, which is perched on a ridge adjacent to the park, has been declared a World Heritage Site.

**Wetlands.** A total of about **400,000 ha** of wetland habitat (much of it along the Danube River) has been permanently or partially lost. A great deal of wetlands habitats have been conserved and/or restored in the DDBR. The Romanian government is currently working with WWF and three countries to restore wetlands along the lower Danube River in a project entitled "The Green Corridor for the Danube Project".

The establishment of a Network of fully functioning wetland areas along the Danube in Romania, Bulgaria, Moldavia and Ukraine will be a major step in restoring the flood plain habitats to be restored in the Danube River Basin. The initiative will connect existing protected areas, new areas to come under protection, and flood plain habitats. A minimum of **600,000 ha** are scheduled to be restored. Management of the floodplain will aim to optimize socio-economic benefits to local communities. The result will be important regionally and internationally, and will establish a Green Corridor along the entire Danube and its tributaries.

Existing wetland protected areas along the Danube and in the Danube Delta Biosphere Reserve: Small Island of Braila (17,586 ha); Rosca-Buhaiova (963 ha); Letea (2,830 ha); Raducu (2,500 ha); Nebunu (120 ha); Vatafu- Lungulet (1,630 ha); Caraorman (2,250 ha); Saraturi-Murighiol (90 ha); Erenciuc (50 ha); Popina (100 ha); Sahalin-Zatoane (21,410 ha); Periteasca- Bisericuta-Portita (4,130 ha); Capul Dolosman (130 ha); Gridul Lupilor (2,080 ha); Istria-Sinoe (400 ha); Grindul Chituc (2,300 ha); Rotunda (230 ha); Potcoava (850 ha); Belciug (110 ha); Starmina Forest (310 ha); Ostrovu Mare-Ostrovul Turcesc (230 ha); Ciuperceni-Desa (660 ha); Ostrovul Acalla (30 ha); Ostrovul Petris (40 ha); Ostrovul Vama (110 ha) and Danube Delta as a whole (580,000 ha) (**26** existing Protected Areas)

Proposed Wetland Protected Areas:

Hanova Ostrovul Corbului (**1980** ha); Ciuperceni-Pisculet (**2590** ha); Danube Sector Km 587 – 636 (**4880**); Ostroavele Cama-Dinu (**200** ha); Lacul Bugeac (**1400** ha); Lacul Oltina (**2510** ha); L.Marleanu (**550** ha); L.Velereasa (**230** ha); L.Baciu (**200** ha); Bratul Borcea (**46200** ha); L.Haznac (**270** ha); Balta Peceneaga (**40** ha); Elestele Turcoaia (**310** ha); Lacurile Sarat si Slatna (**150** ha); Lacul Jijila (**2500** ha); Ostrovul Fundu Mare (**1900** ha); Balta Macin – Smardan (**230** ha); L.Brates (**2110** ha); Brat Mort – Dunarea Veche (**100** ha)

Proposed Restoration Areas

Hanova- Ostrovul Corbului (**1980** ha); Garla Mare- Salcia (**1680** ha); Bistret – Nedeia – Macasu (**1080** ha); Balta Potelu (**23330** ha); Nisipuri (**120** ha); Balta Suhaia (**17490** ha); Balta Greaca (**33820** ha); Ostrovul Calarasi-Raul (**13050** ha); Complexul Crapina (**10000** ha); Zona Prutului inferior (**32400** ha); Incinta Pardina (**27060** ha); Incinta Fortuna (**2380** ha); Incinta Popina (**6800** ha); Incinta Babina Cernovca (**3780** ha)

#### **The Small Islands of Braila, a Natural Reserve in the Lower Danube.**

This group seven small islands comprised mainly of is one of the rare areas along the river that has preserved its natural hydrological conditions and which contains a representative sample of habitats characteristic of floodplains and a former inland delta. These islands lie between two arms of the Danube just south (upstream) of Braila, Romania's second largest city. The site is of major interest for at **65** species of fish and at least **34** internationally protected bird species, two of which, *Phalacrocorax pygmeus* (pygmy cormorants) and *Pelecanus crispus* (dalmation pelican), are considered priorities for EU's LIFE financing. The wetlands perform important hydrological functions, particularly during seasonal inundation, and affect the local microclimate. The adjacent "Big Island of Braila", five times greater in size, was largely drained during the previous political era prior to 1990. Regional management plans in the past have tended toward intensive agriculture and aquaculture, but more recently sustainability has emerged as an objective. The area has been catalogued as Ramsar wetlands site no. **1074**.



**Protected Flora and Fauna.** Numerous plant and animal species have been designated with special conservation status. Annex VIII provides a detailed listing of all such species and the particular conservation status awarded each in Romania.

**3.2. Legal and Institutional Framework.** This section describes the existing legal and Institutional framework for the conservation of biodiversity in Romania. This legal framework is defined by international, national, and local laws, regulations, and policies. The institutional framework is defined by the Romanian constitution, as modified by laws promulgated by Parliament and signed by the President. The summary which follows is supplemented by a detailed description provided in Annexes IX, X, XI, and XII.

**3.2.1. Identification of relevant laws.** Romania has a wide diversity of law directly or indirectly concerned with environmental protection. Recent legislation is derived from the new Romanian Constitution, international treaty obligations, and the requirements of the EU accession process. Because of the transition process, however, legislation prior to 1989 may often conflict with more recent laws and indeed the pace of lawmaking in the last eight years has meant the inconsistencies, gaps, ambiguities, and contradictions which impede a coherent and comprehensive approach to environmental protection. This has resulted in inconsistent management of protected areas and a lack of concerted efforts to conserve biodiversity.

**3.2.2. The Romanian Constitution and Environmental Protection.** The Constitution of Romanian includes a number of provisions that are significant for biodiversity conservation, or directly relate to environmental protection in the country. These include:

- treaties, including international conventions ratified by Parliament, according to the law, are part of national law.
- Constitutional provisions concerning the citizens' rights and liberties shall be interpreted and enforced in conformity with the Universal Declaration of Human Rights, with the covenants and other treaties Romania is a party to. Where any inconsistencies exist between the covenants and treaties on fundamental human rights Romania is a party to, and internal laws, the international regulations shall take precedence.
- A person's right of access to any information of public interest cannot be restricted.
- The right of property compels to the observance of duties relating to environmental protection and insurance of good neighborliness, as well as of other duties incumbent
- The State must secure: exploitation of natural resources, in conformity with national interests; environmental protection and recovery, as well as preservation of the ecological balance; creation of all necessary conditions so as to increase the quality of life.
- Subsoil riches of any nature, ways of communication, the air space, waters with hydropower availability and those which can be used for the public interest, beaches, territorial waters, natural resources of the economic zone and the continental shelf, as well as other assets established by law, shall be exclusively public property.
- Goods which are of public ownership are inalienable. According to the law, they can be managed by the Regies Autonomes, or public institutions, or can be concessioned or rented.

**3.2.3. Romania's Current Protected Area Administrative and Management Structure (see Figure 3).**

Institution/Agency/Organization	Role/Responsibility
Ministry of Water and Environmental Protection	Regulatory and control role for environmental activities, including biodiversity conservation
Ministry of Transport, Physical Planning and Housing	Integration of management plans/land use for Romania
Ministry of Tourism	Tourism promotion
National Forest Regie "Romsilva"	Forest management and enforcement of forest regime
Judet Council	Development and approval of territorial plans, land use changes and new investments; guidance of local council activities
Prefecture- Government representative at the local level	Law enforcement control, judet level legislation, supervision of state agencies at judet level
Local Council	Decision making re: grazing, enforcement of environmental protection at the local level
Mayor	Executive role of local council decisions

EPI	Control/monitoring of environmental laws/regulations; pollution control
Ministry of Agriculture, Food and Forest	Guidelines/expertise for agricultural and forestry activities (e.g. grazing, logging, hunting, mgmt. of protection forests, etc.);
Academic Community	Scientific research for protected areas: criteria, new proposals, scientific basis for management

**Ministry of Water and Environmental Protection (MWEPE).** MWEPE takes primary responsibility for implementation of all national environmental policy in Romania, management of natural resources, and implementation of the major international conventions to which Romania is a party. Specific tasks of the MWEPE relating to biodiversity and natural resource conservation include the following:

- Development of environmental laws, policies and regulations
- Conducting environmental impact assessments
- Regulation of natural resource use and environmental protection
- Environmental auditing and preparation of environmental trends analyses
- Coordination of scientific and technical policy for environmental protection at national and judet level, and rational use of natural resources
- Implementation of the state policy on preservation of flora and fauna
- Implementation of international agreements; establishment of intergovernmental relations in the area of the environmental protection

Romania is divided into 41 administrative units (40 Judets + Bucharest). Under Romanian law, each administrative unit has a regional office of MWEPE, staffed by Inspectorates for Environmental Protection (IEPs). The IEP offices have the following responsibilities:

- Regulation of local natural resource use
- Development of environmental standards
- Implementation of rational mechanisms for nature management
- Monitoring and inventory of the environment
- Enforcement of environmental laws
- Dissemination of environmental information to the public and other stakeholders
- Monitoring for biodiversity conservation

The division of responsibilities between state and territorial governments is a positive step in decentralization of environmental management authority. However, Romanian IEPs are understaffed, poorly paid, and often poorly trained especially in disciplines outside their specific area of expertise. Regarding biodiversity conservation, each IEP is staffed with only 1 to 2 biodiversity inspectors depending on the biological and ecological richness within the administrative unit. At this level of staffing, it is unlikely that effective biodiversity conservation management measures can be implemented.

**Ministry of Agriculture, Food and Forests (MAFF).** MAFF manages virtually all the 6.4 million hectares of forested lands in Romania, excluding forested lands in certain protected areas. MAFF also has control over forestry issues on forested private lands. MAFF authority over forested lands is broad and includes:

- analyses of sustainable forest harvest quantities
- recommendations of annual timber yield to Parliament
- implementation of forestry production authorized by Parliament
- control of hunting and collection of non-timber forest products
- management of road networks in state-owned forests
- oversight of local Forestry Inspectorates
- oversight of the National Forest Regie

The National Forest Regie (Romsilva) manages Romania's forests on behalf of MAFF. Romsilva, while officially functioning under the MAFF, receives its budget independently of MAFF and therefore has a significant degree of autonomy. Romsilva has developed extensive management plans for forested lands, dividing each Judet into management areas known as Ocolul Silvic, each of which is further divided into districts. Romsilva is responsible for forest production and protection, reforestation efforts, and research activities. Currently, Romsilva retains complete control over the harvest of timber on private forested lands. However, future-restituted forest owners will have the opportunity to self-manage their assets in accordance with guidelines for sustainable forestry established by the MAFF.

As with MWEP, authority over inspection of activities related to forest activities resides locally with Forestry Inspectorates (FIs) operating out of each of the 41 administrative units. The authorities of the FIs are broad, and include monitoring Romsilva to ensure forest harvests are performed in accordance with Parliamentary mandates and the Forestry Code. However, these FIs are understaffed, underfunded, undertrained, and staff are underpaid relative to colleagues in Romsilva.

Other government bodies that manage activities directly or indirectly related to biodiversity conservation include the Governors of protected areas, the Ministry of Foreign Affairs (international agreements and cooperation), the Ministry of Finance (financial support of nature conservation activities), Ministry of Transport, Physical Planning and Housing (zones along transportation routes), Ministry of Defense (military areas), and the Ministry of Education (environmental education),.

The Romanian Academy and the academic and research institutions of Romanian universities are a critical part of the institutional support for biodiversity protection. They train scientists, conduct research and inventories, manage scientific collections and archives, advise authorities (e.g., Ministries, Agencies, Parliament, etc.), and serve on public and NGO committees and commissions. Although the universities and research institutions provide a critical source of professional biologists, they fall far short of meeting current and future demand. Salaries for educators are low, compounding problems associated with future demand for biologists in Romania, as students are choosing more lucrative careers. Biologists are well trained in identification of species and ecological conservation issues, but resources are not adequate to conduct research, monitor government conservation programs, or prepare management plans.

<b>Institution/Org/Agency</b>	<b>Capacity Summary</b>
IEP – Inspectorate for Environmental Protection (level of Judet)	<ul style="list-style-type: none"> <li>o Constrained by human resource limitations, lack of enforcement capacity and monitoring equipment due to very poor budgetary situation</li> <li>o Strong technical capacity for monitoring air and water pollution</li> <li>o Lack experience with protected area issues and monitoring requirements</li> <li>o Capacity to play oversight role in local management commissions</li> <li>o Additional, new biodiversity resps, and other responsibilities following restitution</li> </ul>
Romsilva – quasi-autonomous National Forest Regie	<ul style="list-style-type: none"> <li>o Technically strong forest management and warden capacity</li> <li>o Generally well equipped/financially secure</li> <li>o Lack broader awareness of protected area management (e.g., community)</li> </ul>
ICAS – Institute of Forestry Research/Food and Forestry/Ministry of Agriculture	<ul style="list-style-type: none"> <li>o Strong research and management planning capacities</li> <li>o Limited by technical equipment for mapping/plotting</li> <li>o Focus on forestry limits understanding/incorporation of other important resources</li> </ul>
Agricultural Directorates – Judet level	<ul style="list-style-type: none"> <li>o Strong technical background in animal husbandry (zootechnie)</li> <li>o Limited integration with environmental issues</li> <li>o Limited power/influence over resource control</li> </ul>
NGOs	<ul style="list-style-type: none"> <li>o Environmental sector fairly advanced</li> <li>o Increasing capacity for management, influencing policy at national level</li> <li>o At local level, primarily volunteers with ad hoc approach to activities</li> <li>o Provide strong human resource pool to involve in specific, well-directed activities</li> </ul>
MWEP – Ministry of Water and Environmental Protection	<ul style="list-style-type: none"> <li>o Constrained by number of people required to regulate activities</li> <li>o Significant budgetary constraints affecting all facets of operation</li> </ul>
Local communities	<ul style="list-style-type: none"> <li>o Focused on econ. dev. activities which conflict with biodiversity conservation</li> <li>o Increased responsibilities for forest/meadows management with no proportionally increased capacity/understanding of alternatives</li> </ul>
Prefecture	<ul style="list-style-type: none"> <li>o Relying mostly on EPA for environmental matters</li> <li>o No easily identifiable persons in charge (less importance given to biodiversity)</li> </ul>
Judet Council	<ul style="list-style-type: none"> <li>o Strong capacity for territorial planning</li> <li>o Not sufficient integration of all planned components (mostly passive approval)</li> </ul>
Romanian Academy	<ul style="list-style-type: none"> <li>o Strong capacity for scientific research</li> <li>o Limited understanding of mgmt/community issues related to conservation</li> <li>o No interaction with local agencies/communities</li> </ul>
Universities	<ul style="list-style-type: none"> <li>o Strong capacity for scientific research</li> <li>o Limited understanding of management issues and community issues related to natural resources conservation</li> <li>o Little interaction with local agencies/communities</li> <li>o No integration between forestry research and other biological research</li> </ul>
Ministry of Tourism	<ul style="list-style-type: none"> <li>o Lacking capacity of tourism regulation and promotion</li> </ul>

**3.2.4. International Agreements.** Of particular significance to biodiversity conservation, Romania has played an active role in many international environmental issues and is a Contracting Party to most international and regional environmental agreements and conventions. Romania has ratified the Convention on Biological Diversity, which is legally binding within Romanian law. This not only underscores Romania's commitment to the principle of biodiversity conservation, but it also provides legitimacy for incorporating biodiversity protection into the Romanian regulatory framework. The difficult task has been to incorporate biodiversity conservation principles effectively into coherent policies in all economic sectors, to coordinate the efforts of various ministries, to develop and implement clear management plans for protected areas, and to ensure adequate implementation of these programs, enforce the laws

**3.2.5. International and Regional Conventions (Annex IX).** According to Art. 11 of the Romanian Constitution, all international conventions signed and ratified by Romania become part of internal legislation. Romania is a Contracting Party to ten international conventions related to biodiversity conservation, namely:

- Convention on the Protection of World Cultural and Natural Heritage (Paris 1972) - Law **178/1990**
- Convention on Wetlands of International Importance Especially as Habitat for Waterfowl (Ramsar 1971) - Law **5/1991**
- Convention for the Conservation of European Wildlife and Natural Habitats (Bern 1979) - Law **13/1993**
- Biological Diversity Convention (Rio de Janeiro 1992) - Law **58/1994**;
- Convention on International Trade with Endangered Species (Washington 1973) - Law **69/1994**
- Convention on Climate Change (UNO 1992) – Law **24/1994**
- Convention on Migratory Species (Bonn 1979) - Law **13/1998**
- Agreement on the Conservation of African-Eurasian Migratory Waterfowl (Hague 1995) – Law 89/2000
- Agreement on Conservation of Bats (London 1991), Bonn Article IV – Law **90/2000**
- Protocol to Convention on Climate Change (Kyoto Protocol 1997) – Law **33/2001**

Romania is also an active participant in regional environmental initiatives such as the Danube Environmental Program, the Black Sea Environment Program, the Convention on Marine Pollution (London), and the Environment for Europe process. The Danube and Black Sea Programs, which are largely focused on water quality improvement, have recognized the important connection that exists between land-use management and water quality. Through effective protected areas management and land use policies - in particular protection and restoration of wetland areas - water quality improvements in the Danube and Black Sea will be achieved. These improvements will not only benefit Romania but other countries as well. Romania is also participating in several European Union programs including PHARE and activities working on improving environmental standards and conditions within Romania (and harmonized to EU standards).

### **3.2.6. ROMANIA AND THE EUROPEAN UNION ACCESSION PROCESS**

**The Application for EU Membership.** Romania submitted its application for membership of the European Union on 22 June **1995** along with a national pre-accession strategy and a declaration signed by the Presidents of the Republic, the Senate and the Chamber of Deputies and the Prime Minister and the leaders of all the political parties represented in Parliament. This declaration expresses Romania's political will to pursue the consolidation and development of the rule of law, political pluralism, the separation of powers, free elections, respect for human rights and the establishment of a market economy compatible with the principles governing the European Union.

At its meeting in December **1997**, the European Council accepted the Commission's view that Romania's progress towards integration has been hampered by slow economic and political reform and hindered by the continuing weakness of its administrative structures. Accordingly, the Council postponed the start of accession negotiations with Romania for the time being, but did offer substantial assistance to the country in the form of a strengthened pre-accession strategy aimed at improving its capacity to meet the requirements and obligations of EU membership.

**3.2.7. The Europe Agreement.** Romania's relations with the EU are currently implemented under the terms of a Europe Agreement, which entered into force in February **1995**. Its aim is to provide a

framework for political dialogue, promote the expansion of trade and economic relations between the parties, provide a basis for Community technical and financial assistance, and an appropriate framework to support Romania's gradual integration into the Union. The institutional framework of the Agreement provides the necessary mechanism for implementation, management, and monitoring of all areas of relations. Subcommittees examine questions at a technical level. The Association Committee, at a senior official level, provides for in-depth discussion of issues and often finds solutions to problems arising under the Agreement. The Association Council examines the overall status of and perspectives for the relationship and provides the opportunity to review Romania's progress in preparing for accession.

In order to strengthen government policy- and decision-making in matters related to European integration, the Government set up the Department for European Integration, which in January **1997** was upgraded into a Ministry answering to the Prime Minister. An interministerial committee chaired by the Prime Minister and served by the Department for European Integration provides advice on European integration. Ministries retain responsibility for the execution of their respective parts of the Europe Agreement and the pre-accession preparation, including the approximation of legislation. The Department for European Integration has been responsible for the preparation of the national strategy for the implementation of the Commission's White Paper on the internal market, in consultation with the **23 EU** Integration Working Groups.

Currently, the main issues discussed in the framework of the Europe Agreement are: approximation of legislation and pre-accession strategy; macroeconomic progress; trade issues; opening of Community programs; certification and standardization issues; and third-pillar cooperation.

**3.2.8. EU Assistance Programs.** Under Phare, **ECU 118.4 million** was committed in **1996** for Romania. Total commitments for the period 1990-96 were **ECU 731 million**. The principal sectors for which Phare has been used are in agriculture, education, training and research, infrastructure; and the private sector, restructuring and privatization. A cross-border cooperation program was approved in **1996** for the border with Hungary; it includes projects in the sectors of economic development, transport, environment and the third pillar. There have been difficulties with program implementation owing to the lack of a clear commitment to policy reform, particularly in agriculture and industry. But reasonable commitment rates have been maintained. For example, of some **ECU 200 million** provided to Romania in **2001** under Phare, approximately **10 million** is loosely attributable to ecological restoration.

Since the beginning of **1997**, Romania has been able to participate in Socrates, Leonardo and Youth for Europe. It is preparing to take part in LIFE, SAVE, ISPA, SAPARD and various social programs as well.

**3.2.9. EU Environmental Legislation.** In applying for membership on the basis of the Treaty, Romania has accepted without reserve the basic aims of the Union, including its policies and instruments dealing with environmental protection and the conservation of biodiversity. EU environmental policy, derived from the Treaty, aims towards sustainability based on the integration of environmental protection into EU sectoral policies, preventive action, the polluter pays principle, fighting environmental damage at the source, and shared responsibility. The *acquis* comprises approximately 200 legal acts covering a wide range of matters, including water and air pollution, management of waste and chemicals, biotechnology, radiation protection, and nature protection. Member States are required to ensure that an environmental impact assessment is carried out before development consent is granted for certain public and private projects.

The principal EU legislation concerning biodiversity and site protection are the Council Directives on the Conservation of Wild Birds (**79/409/EEC**) and on the Conservation of Natural Habitats and of Wild Fauna and Flora (**92/43/EEC**). Both of these Directives seek to establish broad-based systems of biodiversity conservation based on ecologically sustainable sectoral policies (especially in agriculture, forestry, and urban and industrial development), as well as site-based protected areas, aimed at forming the **Natura 2000** network. The Directives have extensive schedules of habitat types and key species requiring particular conservation attention. In Romania, little legislation exists to implement such provisions (and all of it is obsolete). For example, Romania has no authoritative list of threatened species, no site classification system and no protected area management infrastructure. These issues are, however, to be addressed in new legislation under the recent law on environmental protection (**Law No. 137/1995**).

**3.2.10. Romanian Legislative Approximation to EU Environmental Instruments.** The Opinion published by the Commission noted that up to now, environmental issues in Romania have not been

effectively addressed and most environmental legislation is quite old. Although the law on environmental protection (**Law No. 137/1995**) has come into force, it is not yet fully applied, and investment is very low compared to EU levels. The situation is worsened by the lack of an environmental financing instrument, though a National Environmental Fund, financed by pollution taxes and the State budget, which was expected to be in place by the end of **1997**, and is still not in place as of the writing of this report.

On the whole, the Commission reported that very little has been done to date in the field of approximation of environmental legislation to that of the Community and that there are no specific plans for the transposition and enforcement of the remaining part of the environmental *acquis*. Particular attention had to be given to the quick transposition of framework directives dealing with air, waste, water, and the Integrated Pollution Prevention and Control (IPPC) directive, as well as the establishment of financing strategies for legislation in the water, air, and waste sectors requiring major investments.

In order to embark on a path of adaptation to the EU *acquis*, Romania would have to place higher priority on environmental issues, implement focused environmental accession strategies and work programs, significantly increase related financial and other resources and develop its administrative capacity. If such a strategy is followed, full transposition of the *acquis* could be achieved in the medium to long term. However, effective compliance with a number of pieces of legislation requiring a sustained high level of investment and considerable administrative effort could be achieved only in the very long term.

### **3.2.11. DOMESTIC LAW ON PROTECTED AREAS AND BIODIVERSITY CONSERVATION**

**Primary Legislation.** On December 30, **1995**, **Law No. 137** on Environmental Protection (EP Law) came into force (*Monitorul Oficial part I, No. 304*). This legislation represented the first comprehensive revision of Romania's basic environmental regulations since **1973**. Under the **1991** Constitution, it provides the organic framework law upon which further implementing (ordinary) laws must be developed.

Those clauses most relevant for the present project are set out in Table 1. These make it clear that the EP Law is comprehensive in its scope with respect to protected areas and biodiversity conservation, but that a great deal of detailed work and investment will be required to develop the ordinances, amending and harmonizing instruments, staff capacity and organizational structures required for its application (see below).

So far, the government has mainly concentrated on those aspects related to environmental pollution monitoring, and the procedures for drawing up environmental impact assessments (promulgated as **Ordinance 125 of 1996**). The MWEF has also been developing a specific law on the Status of Natural Protected Areas, Natural Monuments and Other Natural Heritage Assets. However, the draft has not yet been adopted by the Ministry for submission to the government. Until such a law is promulgated, the status of protected areas, and thus biodiversity conservation in Romania is dependent on outdated and/or conflicting legislation, which is often not comprehensive, and which provides for conflicting authority over natural resources conservation.

**National Legislation-Environmental Protection.** On December 30, **1995**, **Law no. 137** on Environmental Protection (the EP law) came into force (*Monitorul Oficial, Part I, No. 304*). This legislation represented the first comprehensive revision of Romania's basic environmental regulations since 1973. Under the 1991 Constitution, it provides the organic framework law upon which further implementing (ordinary) laws must be developed (Annex XI).

**National Legislation-Land Use, Ownership and Management.** The organic Law no. **18** of 1991 (The Land Law) lays the basis for land ownership and use in the country. It led to the privatization and restitution of land (including forested land up to 1 ha) appropriated by the state during the communist period back to the original owners (up to **10 ha** per family). The law was amended by Law no. **169** promulgated in November **1997**, which increased the amount of land to be returned to private ownership, up to a limit of **30 ha** of forest and **50 ha** of agricultural land per individual. This amendment, if effected in the short term, is expected to have significant ramifications on deforestation of current production forests (see Chapter 4). This amendment should not affect ownership or deforestation of lands in parks and strictly protected areas, as ownership will remain with the State. However, the potential negative effect of this amendment on ownership of forest land in the Vanatori Neamt region is expected to be mitigated by part of a model World Bank GEF project which has resulted in a cooperative sustainable forest management agreement between the quasi-autonomous National Forest Regie and future land owners.

**National Legislation-Forest Code.** The management of forests and forest products (on both state owned and private land) is carried out under the provisions of Law no. **26** of **1996**, “Codul Silvic”, the ordinary law which relates back to Articles **52** and **88** of the EP law. The Ministry of Agriculture, Food and Forests (MAFF) is charged with implementing the law. By law, the implementing party for forest management is a quasi-autonomous financially self-sufficient state body, “Regia nationala a padurilor” (NRF, National Forest Regie), the organizational structure of which stems from the prior communist government. The NRF has undergone minor changes, most notably the loss of inspection authority to local administration, although it has retained an autonomous, monopolistic control over forest resources, such as timber, non-timber products (fruits, nuts, fungi, etc.), and hunting.

Article **16** of the Forest Code states that forest management should be carried out with both ecological and socio-economic objectives, and Article **23** confirms the need to maintain forest biodiversity. These provisions continue the long-standing traditions in Romanian forestry, of which the practitioners are justly proud, as the country today supports some of the finest and most extensive tracts of native broad-leaved forest in Europe, together with its associated flora and fauna. Forest land is managed according to ten year plans prepared by “Institutul de Cercetare si Amenajari Silvice” (ICAS – Forest Research and management Institute). These plans are adopted by Ministerial Order and have legal force.

**National Legislation – Hunting Law.** The regulation of hunting is effected by ordinary Law no. **103** of **1996** (Hunting Law). It identifies game species as a public good of the national interest, and insists that hunting must be carried out within the context of the biodiversity conservation and the maintenance of ecological balance. In principle, hunting may be carried out on any land, irrespective of ownership. Licenses are issued either by state-controlled hunting associations or, on forest land, the NRF. Under the EP Law, which takes precedence over the Hunting Law, hunting could not be carried out in protected areas established under the EP Law unless it was a permitted management activity. It should be noted that the European bison is listed as a protected game species, attracting a fine of 5 million lei for illegal shooting.

**3.3. Status of current situation.** A comparison of the international treaty obligations with the requirements set out in the Environmental Protection Law No. **137/1995** indicates that Romania is, or has made clear its intention of taking full account of its international obligations. The EP Law is comprehensive in its scope with respect to protected areas and biodiversity conservation, but a great deal of detailed work and investment will be required to develop the ordinances, amending and harmonizing instruments, staff capacity and organizational structures required for its application. The MWEF has also been developing a specific law on the Natural Protected Areas, Natural Monuments and Other Natural Heritage Assets. However, the draft has not yet been adopted by the Ministry for submission to the government. Until such a law is promulgated, the status of the Romanian National Parks is simply that of a nominal declaration made by Ministerial Order **No. 7** of 27 January **1990**, while the Vanatori Neamt region has not been recognized as a protected area under any previous legislation.

So far as areas designated as National Parks are concerned, Articles **134** and **135** of the Constitution could imply that all land within the park boundary should be under state ownership. This would mean that any land owned by communes or private individuals would have to be expropriated and due compensation paid, in accordance with the Constitution and Land Law. A law of dismemberment (No. **33** of **1994**), however, ensures that such expropriation should not lead to the fragmentation of property, and would have to be taken on board in the boundary analysis exercise.

The provisions of Article **2** of the Land Law (which define the different types of land uses) take in conjunction with relevant provisions of the EP Law (especially Articles **34**, **50**, **54**, and **55**) indicate that any land designated as a reserve or natural monument should be controlled and regulated by an appropriate authority dedicated for that purpose. At present, this would mean the Environmental Protection Department (EPD) of MWEF. In this regard, in September **1997** the MWEF established within the EPD a Directorate for Biodiversity Conservation and Protected Areas.

On the other hand, Articles **111** and **112** of the Forest Code and Article **134**, para **5** of the Constitution, enable the NRF within its jurisdiction to establish, administer and manage protected areas, including national parks, for their biodiversity value. In addition, Article **54** of the EP Law also states: “The protected areas and Natural Monuments shall be declared by normative acts or regulations, including by forest planning”. Thus, the NRF (as any other land owner) may create and manage a protected area

within its area of jurisdiction, but the recognition and classification of such a site as a part of the National Protected Areas Network (Article **55a** of the EP Law) is a responsibility placed on the initiative of the Romanian Academy. Under the provisions of the Land Law, such sites ought to be controlled and regulated by the EPD, through its Directorate for Biodiversity Conservation and Protected Areas.

In the case of Vanatori Neamt, which has no formal designation as a protected area, the NRF is responsible for the state forestland management. However, to facilitate the bison reintroduction and future visitor access, the existing Forest Management Plans have to be amended to incorporate these objectives and contingent implications for forestry management and budgets.

**3.4. International Donor Biodiversity Conservation Efforts in Romania.** Numerous bilateral and multilateral development donors and international NGOs have assisted Romanian biodiversity conservation efforts. Major donors include the U.S. Agency for International Development, The World Bank, the European Union through its PHARE and LIFE – Natura programs, the United Nations Development Program, and the World Wide Fund for Nature. A comprehensive summary of these donor efforts is provided in Annex XIII.



### Summary of Biodiversity Conservation Issues, Existing Problems, and Recommendations

Although, as it has been noted, there are a considerable number of damaging practices and activities affecting biodiversity in Romania, the possibilities for reducing damage to biodiversity are large. Within the country there is a highly developed sense of the connection of people to the land. Following the political changes of 1989 there has been a net return of people to rural areas.

Traditional harvesting and grazing practices in Romania present an opportunity to support a sizeable rural population which lives within limits of the available biological resources. Tourism could be developed to provide such communities with additional sources of revenue while offering incentives to retain or revive traditional practices that are sustainable, or even to develop new means for sustainable using natural resources.

There is a great potential to develop ecological tourism activities in many of Romania's natural areas. Newly formed associations of tourist homes and farms (Agrotourism), are currently promoting this idea. The jump to ecological tourism in these areas would not be a difficult undertaking. Some small projects are already in place and other larger ones have been proposed.

**4.1. Legal Framework.** Through direct environment, water and forestry legislation, through ratification of International Conventions, and through rules promulgated by the Water and Environment and Agriculture Ministries, Romania has adopted a very strong position regarding pollution minimization, the manipulation of natural resources, and the exploitation of flora and fauna. Natural and semi-natural areas cover some 47% of the country, and protected areas in Romania number 827, including parks, reserves, monuments, biosphere reserves, and others. Penalties for violation of legislative criteria are stringent, including fines and prison sentences for flagrant violations.

#### Problem

Management, enforcement and implementation stand out as major obstacles to adequate compliance with environmental laws. In the last eleven years, control of the Ministry of the Environment has changed hands nine times; each Minister bringing a new organizational structure, which is inherently unsettling. Three of these former Ministers and Secretaries of State are under investigation for allegations of wrongdoing while in office. Currently, numerous Ministries have (or perceive to have) authority over various natural resource elements in protected areas (**Figure 3**). For example, within the Retezat Biosphere Reserve, the Ministry of Water claims jurisdiction over waterways and wetlands, the Ministry of Agriculture claims jurisdiction over forested lands and agricultural endeavors, the National Park Authority claims jurisdiction over lands encompassed by the park boundary, and the Romanian Academy claims jurisdiction over management of natural resources in the scientific reserve. It appears that there is no clear direction within the existing legislation, rules or policies which defines solutions in the event of overlap. As a result, problems associated with conflict are not effectively or expediently resolved, thereby in effect allowing for potentially inappropriate management of resources.

#### Possible Solutions

**4.1.A** A process to make government more transparent through the identification and streamlining of jurisdictional overlap should be initiated within government Ministries. Various members of parliamentary committees, the NGO community and affected stakeholders could be invited to participate in this process.

**4.1.B** Institutional strengthening, at governmental administrative (Ministry, National Company) and local levels (environment, water and forestry inspectorates), could vest greater authority and responsibility in the implementation and enforcement of environmental and forestry conservation legislation. Cross sectoral training of local inspectors, especially in the area of bioconservation needs, could broaden effectiveness of monitoring and enforcement programs.

**4.1.C** NGO strengthening could create dialogue to enhance institutional capacity and initiate the streamlining process.

**4.1.D** Work with institutions to better define Romania's protected areas and establish buffer zones of semi-protected areas, including geological and urban areas to reduce pressure on core areas

conserving natural resources, as well as to identify and protect of additional natural resource areas, as appropriate. Assistance should be provided with the development of plans for the comprehensive management of protected areas.

**4.2. Land Restitution.** In 1991 the Romanian government initiated a program to privatize forest and agricultural land through restitution to pre-1948 private owners and their families. Initially the government returned approximately 350,000 hectares of forested land to some 500,000 parties who successfully defended their historic rights to the property. The Romanian government, which currently manages some 6.4 million hectares of forested lands, is engaged in measures to return an approximate additional 2 million hectares to private owners. The forests currently under state control fall into two categories: production (70%) and protection (30%). Production forests are managed to produce sustainable timber harvests while protection forests are managed to protect watersheds for water storage and erosion control, provide seed base, and secure wildlife habitat. All lands to be restituted are in production forests.

#### Problem

Following the demise of the communist government in Romania, the political and social climate was in turmoil. Poor recipients of initially restituted forested lands saw harvesting them as a means to secure some financial gain. Approximately one-third of these restituted forest lands were harvested, many of them clearfelled. Due to the turmoil existing at the time, it is unclear whether these lands were felled by the new owners, by the state forest authority, or by opportunists who felled trees on lands on which they had no authority. What is clear is that for the most part these forests have not regenerated, and that they offer little to no sustainable harvest potential for the future for these landowners. In late 1999, the World Bank estimated that approximately US\$590 million have been lost as a result of this unsustainable harvesting associated with forest restitution, which represents an annual economic value of approximately US\$49 million (assuming sustainable harvest). World Bank values standing timber reserves in all of Romania's remaining forests at roughly US\$13.4 billion, which represents an annual economic value of approximately US\$3.1 billion (assuming sustainable harvest). [World Bank Forestry Sector Note, October 1999]

What is more, numerous individuals interviewed throughout the country are concerned that future restitution measures will not include title to forested lands. They expressed concern that government failure to convey title resulted in timber harvesting associated with initial restitution efforts because recipients had no guarantee that the land would remain theirs. Thus, without adequate conveyance of title and education measures to ensure responsible forest management, there is a high risk that large tracts of forested land to be restituted in the near future will be logged by unsustainable means. Following an initial surge in economic gain, this large-scale clearfelling could have a catastrophic effect on the future of Romania's forest economy, wildlife habitat, and watershed protection. Ripple effects might include severe erosion, which would deplete forest regeneration potential and increase siltation of surface water bodies, resulting in destruction of fish and aquatic invertebrate habitat, and thus put pressure on larger vertebrates which feed on them, and so on. Intangible effects include the degradation of inherent aesthetic value of standing forests and resultant potential local losses to the tourism sector.

Following restitution of forested lands, the State will manage 4.4 million hectares of forest, divided virtually equally between protection and production. Therefore, a greater amount of pressure will be placed upon the National Forest Regie (Romsilva) to produce suitable harvest to satisfy Ministry budgetary requirements. If harvesting efforts are not well integrated between private and public production forests, this could not only place greater pressure on state-controlled production forests, but could cause unsustainable harvesting in protection forests. Further, should the efforts not be integrated between private and public owners, a glut of timber could reach the market thereby lowering timber prices and creating artificially low economic returns for forests inappropriately harvested.

The World Wide Fund for Nature (WWF) has recently concluded that tourism is the world's largest growth industry, valuing it at \$4 trillion, accounting for 11.7% of Global GDP. WWF estimates that tourism accounts for over 200 million jobs, and is the primary industry of Cuba, Kenya and Costa Rica.

#### Possible Solutions

Efforts to attempt to minimize the delay of title transmission to future restituted land owners, so that they receive title to their land at approximately the same time they are informed of their entitlement to it, seem to offer the best potential benefit for the conservation of the forest. These efforts should be undertaken in

conjunction with efforts to encourage community management of forest resources and to coordinate the sustainable harvest of the forests under community control with the National Forest Regie. Because the National Forest Regie is large and ingrained in management practices instilled from 1950 to 1990, an action in the best interest of the community and the forests themselves may be the privatization of the Regie. In order to secure even greater economic gain, ecotourism and rural tourism should be encouraged.

#### Land Titling

**4.2.A** Pressure should be placed upon local councils responsible for issuing title to provide title to restituted land owners quickly in accordance with national law

**4.2.B** Work with federal government to pressure local councils to title land expediently in accordance with the law. The Ministry of Agriculture could be compelled to suggest to Parliament that local councils expediently issue title to forested land.

**4.2.C** Organize communities with vested interests in natural resource management to pressure local councils, the federal government and the courts to expediently issue title to land

#### Community-based Forest (natural resource) Management

**4.2.D** Identify all stakeholders and their key representatives (e.g., community elders, important local figures, city councilmembers, important businesspeople, key educators, individuals dedicated to conservation, etc.) in and around conservation areas.

**4.2.E** Encourage establishment of cooperatives at the level of the conservation area, consisting of landowners and/or municipalities, to ensure sustainable natural resource management. Council cooperatives on economics associated with the natural resources under their management control.

**4.2.F** Develop conservation area-specific management plans for the sustainable management of the natural resource, including all stakeholders in the development. Use "horizontal" approach to convey information; eliminate inherent bias associated with "intellectual communicating to simple people". Utilize existing successful models of community-based natural resource management to develop skeleton of the model for the conservation area specific plan. Include as intrinsic components local timber processing and forestry certification measures to extract highest international economic value from harvested timber through exports of locally-processed certified timber and timber products.

**4.2.G** Develop conservation area-specific agenda. Develop a mechanism to allow for continuous feedback from interested stakeholders to convey ownership of process to all stakeholders. Care should be taken to minimize hesitance of Romanians to participate in workshops; these were conducted regularly prior to 1990 and many Romanians are fearful of the lack of follow-through. Meetings should be conducted as needed to present ideas and collect feedback on a regular basis.

#### Privatization/Competition

**4.2.H** Pressure should be brought upon the National Forest Regie (Romsilva) to privatize in accordance with national law. Concurrent with land restitution, the Regie could be effectively broken into numerous autonomous competitive companies responsible for the management of state-owned forests and the provision of forestry management services to restituted land owners and community-based forest management cooperatives. Similarly, state subsidies to inefficient, low-quality furniture manufacturing operations left-over from the former communist government should be eliminated to promote generation of higher quality export-minded industry.

#### Ecotourism and Rural(Agro)-tourism

**4.1.I** In order to capitalize on the economic benefits associated with increase foreign visitation to Romania, and the growing Agrotourism industry within Romania, efforts could be undertaken by forest cooperatives (or other community-based natural resource management groups) to develop a greater ecotourism base.

**4.2.J** Advertising campaigns, natural resource visitation infrastructure, conservation area-specific education information could be developed to promote each area.

**4.2.K** Local land owners could be encouraged to responsibly develop their land to accommodate tourists.

**4.2.L** Several areas in Romania could be developed as eco-agro-cultural tourism zones. For example, many opportunities to visit natural, agricultural and cultural areas exist and are readily available in the Danube Delta. Other areas, such as around Brasov, or Hateg, are ripe for similar tourism development. For example, around Hateg, opportunities exist to visit a national park, geological dinosaur digsites, roman ruins, the oldest church in Romania, castles and agricultural areas.

**4.3. Bioconservation Education.** Respect for natural areas is in its infancy in Romania. National Parks are little visited, and for people those who do visit them, little infrastructure exists to either accommodate or educate these visitors as to the natural resource at their disposal. Some exemplary work is being conducted in Retezat, Piatra Criului and Rodna National Parks which serves to educate visitors and expand protected areas, but many protected areas receive little attention or financing from the Romanian government. Responsible management of trash and other pollution in protected areas is virtually inevent, except in certain cases where the tourism has demanded that the aesthetic value of local landscapes be maintained.

#### Possible Solutions

**4.3.A** Engage in a national environmental education project to promote awareness and develop local sense of economic values of natural resources (including forests, agriculture, biodiversity and aesthetic value to tourism). Work with local and international NGOs to develop community sense of economic value of biodiversity resources in their communities, and develop ecotourism infrastructure to encourage eco/agrotourism activities. Educate private land owners to develop organic produce certification for non-timber forest products and for farming on lands in fallow since 1989, and/or on those lands where agricultural chemicals have not been applied due to lack of economic resources to acquire and apply them.

**4.3.B** Reward high-achieving educators and students in the field of biodiversity conservation together for seminars in Romania's National Parks to disperse biodiversity and other ecological information. Encourage Judeti to engage teachers and students in natural conservation activities to promote greater awareness of the biodiversity in their area and to change the style of natural resource communication in schools. Work with municipalities, schools, teachers and students, and concerned citizens on environmental awareness and natural resource conservation.

**4.3.C** Engage in efforts to develop park and other natural resource area infrastructures, including education, monitoring and enforcement. This is especially pertinent in areas where little attention has been paid to date, which stand to be most highly affected in the future by deforestation associated with land restitution, and in which the economics of ecotourism could offset deforestation or other activities detrimental to biodiversity conservation.

**4.4. Conclusion.** Romania faces many changes as it moves towards a market economy. As the country's economic wealth grows in the future, new environmental pressures and challenges will arise. Romania remains very wealthy from the perspective of biodiversity, especially in the Danube Delta and the Carpathian Mountains. Pressures on aquatic resources from industrial, agricultural and urban discharges, and on forests from land restitution are principal threats to the conservation of Romania's biodiversity. These threats are compounded by a legal and policy framework which is frequently conflicting, highly underenforced, and often based on the state-controlled structure of the former communist government. Furthermore, the lack of education and a missing sense of personal and community control of resources is promoting an atmosphere of personal, and not national, economic well being.

While private ownership of land will increase private wealth, rises in personal consumption and the manufacture of consumer goods will have adverse effects on environmental quality and biodiversity unless industrial outputs and biologically diverse resources are adequately managed. Privatization and decentralization of industry will bring both new threats as well as new opportunities for the protection of biodiversity. Although there has already been considerable human modification to the Romanian environment, the potential exists for Romanian development to proceed in a manner that protects the country's valuable and extensive biological resources and at the same time improves the country's economic well being.

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## ANNEX I A

### USAID Environment and Natural Resources Code

Laws in effect as of January 6, 1999

U.S. Code 22 U.S.C. Section 2151(p)

TITLE 22--FOREIGN RELATIONS AND INTERCOURSE

CHAPTER 32--FOREIGN ASSISTANCE

SUBCHAPTER I--INTERNATIONAL DEVELOPMENT

Part I--Declaration of Policy; Development Assistance Authorizations

Sec. 2151p. Environmental and natural resources

(a) Congressional statement of findings

The Congress finds that if current trends in the degradation of natural resources in developing countries continue, they will severely undermine the best efforts to meet basic human needs, to achieve sustained economic growth, and to prevent international tension and conflict. The Congress also finds that the world faces enormous, urgent, and complex problems, with respect to natural resources, which require new forms of cooperation between the United States and developing countries to prevent such problems from becoming unmanageable. It is, therefore, in the economic and security interest of the United States to provide leadership both in thoroughly reassessing policies relating to natural resources and the environment, and in cooperating extensively with developing countries in order to achieve environmentally sound development.

(b) Assistance authority and emphasis

In order to address the serious problems described in subsection (a) of this section, the President is authorized to furnish assistance under subchapter I of this chapter for developing and strengthening the capacity of developing countries to protect and manage their environment and natural resources. Special efforts shall be made to maintain and where possible to restore the land, vegetation, water, wildlife, and other resources upon which depend economic growth and human well-being, especially of the poor.

(c) Implementation considerations applicable to programs and projects

(1) The President, in implementing programs and projects under this part and part X of this subchapter, shall take fully into account the impact of such programs and projects upon the environment and natural resources of developing countries. Subject to such procedures as the President considers appropriate, the President shall require all agencies and officials responsible for programs or projects under this part and part X of this subchapter--

(A) to prepare and take fully into account an environmental impact statement for any program or project under this part and part X of this subchapter significantly affecting the environment of the global commons outside the jurisdiction of any country, the environment of the United States, or other aspects of the environment which the President may specify; and

(B) to prepare and take fully into account an environmental assessment of any proposed program or project under this part and part X of this subchapter significantly affecting the environment of any foreign country.

Such agencies and officials should, where appropriate, use local technical resources in preparing environmental impact statements and environmental assessments pursuant to this subsection.

(2) The President may establish exceptions from the requirements of this subsection for emergency conditions and for cases in which compliance with those requirements would be seriously detrimental to the foreign policy interests of the United States.

(Pub. L. 87-195, pt. I, Sec. 117, formerly Sec. 118, as added Pub. L. 95-88, title I, Sec. 113(a), Aug. 3, 1977, 91 Stat. 537; amended Pub. L. 95-424, title I, Sec. 110, Oct. 6, 1978, 92 Stat. 948; Pub. L. 96-53, title I, Sec.

122, Aug. 14, 1979, 93 Stat. 366; Pub. L. 97-113, title III, Sec. 307, Dec. 29, 1981, 95 Stat. 1533; renumbered Sec. 117 and amended Pub. L. 99-529, title III, Sec. 301(1), (2), Oct. 24, 1986, 100 Stat. 3014; Pub. L. 101-513, title V, Sec. 562(d)(4), Nov. 5, 1990, 104 Stat. 2031.)

#### References to Subchapter I Deemed To Include Certain Parts of Subchapter II

References to subchapter I of this chapter are deemed to include parts IV (Sec. 2346 et seq.), VI (Sec. 2348 et seq.), and VIII (Sec. 2349aa et seq.) of subchapter II of this chapter, and references to subchapter II are deemed to exclude such parts. See section 202(b) of Pub. L. 92-226, set out as a note under section 2346 of this title, and sections 2348c and 2349aa-5 of this title.

#### Codification

Other sections 117 of Pub. L. 87-195, pt. I, were classified to section 2151o of this title prior to repeal by Pub. L. 95-424 and Pub. L. 103-149.

#### Amendments

1990--Subsec. (c)(1). Pub. L. 101-513 inserted "and part X of this subchapter" after "this part" wherever appearing.

1986--Subsec. (d). Pub. L. 99-529, Sec. 301(2), struck out subsec. (d) relating to loss of tropical forests in developing countries. See section 2151p-1 of this title.

1981--Pub. L. 97-113 amended section generally, substituting subsecs. (a) to (d) for former subsecs. (a) and (b) which authorized President to furnish assistance under this subchapter for developing and strengthening capacity of less developed countries to protect and manage their environment and natural resources and directed President to take into consideration environmental consequences of development actions in carrying out this part.

1979--Subsec. (c). Pub. L. 96-53 repealed subsec. (c) which related to studies and report to Congress by the President on the identification of major environmental and natural resource problems.

1978--Pub. L. 95-424 designated existing provisions as subsec. (a) and added subsecs. (b) and (c).

#### Effective Date of 1979 Amendment

Amendment by Pub. L. 96-53 effective Oct. 1, 1979, see section 512(a) of Pub. L. 96-53, set out as a note under section 2151 of this title.

#### Effective Date of 1978 Amendment

Amendment by Pub. L. 95-424 effective Oct. 1, 1978, see section 605 of Pub. L. 95-424, set out as a note under section 2151 of this title.

#### Section Referred to in Other Sections

This section is referred to in sections 2191, 2199 of this title.

## ANNEX I B

### USAID endangered species (Biodiversity Code)

Laws in effect as of January 6, 1999

U.S. Code 22 U.S.C. Section 2151(q)

TITLE 22--FOREIGN RELATIONS AND INTERCOURSE

CHAPTER 32--FOREIGN ASSISTANCE

SUBCHAPTER I--INTERNATIONAL DEVELOPMENT

Part I--Declaration of Policy; Development Assistance Authorizations Section 2151(q).  
Endangered species.

(a) Congressional findings and purposes

The Congress finds the survival of many animal and plant species is endangered by over-hunting, by the presence of toxic chemicals in water, air and soil, and by the destruction of habitats. The Congress further finds that the extinction of animal and plant species is an irreparable loss with potentially serious environmental and economic consequences for developing and developed countries alike. Accordingly, the preservation of animal and plant species through the regulation of the hunting and trade in endangered species, through limitations on the pollution of natural ecosystems, and through the protection of wildlife habitats should be an important objective of the United States development assistance.

(b) Remedial measures

In order to preserve biological diversity, the President is authorized to furnish assistance under subchapter I of this chapter, notwithstanding section 2420 of this title, to assist countries in protecting and maintaining wildlife habitats and in developing sound wildlife management and plant conservation programs. Special efforts should be made to establish and maintain wildlife sanctuaries, reserves, and parks; to enact and enforce anti-poaching measures; and to identify, study, and catalog animal and plant species, especially in tropical environments.

(c) Funding level

For fiscal year 1987, not less than \$2,500,000 of the funds available to carry out subchapter I of this chapter (excluding funds made available to carry out section 2151b(c)(2) of this title, relating to the Child Survival Fund) shall be allocated for assistance pursuant to subsection (b) of this section for activities which were not funded prior to fiscal year 1987. In addition, the Agency for International Development shall, to the fullest extent possible, continue and increase assistance pursuant to subsection (b) of this section for activities for which assistance was provided in fiscal years prior to fiscal year 1987.

**(d) Country analysis requirements**

**Each country development strategy statement or other country plan prepared by the Agency for International Development shall include an analysis of--**

- (1) the actions necessary in that country to conserve biological diversity, and**
- (2) the extent to which the actions proposed for support by the Agency meet the needs thus identified. [emphasis added]**

(e) Local involvement

To the fullest extent possible, projects supported under this section shall include close consultation with and involvement of local people at all stages of design and implementation.

(f) PVOs and other nongovernmental organizations

Whenever feasible, the objectives of this section shall be accomplished through projects managed by appropriate private and voluntary organizations, or international, regional, or national



nongovernmental organizations, which are active in the region or country where the project is located.

(g) Actions by AID

The Administrator of the Agency for International Development shall--

- (1) cooperate with appropriate international organizations, both governmental and nongovernmental;
- (2) look to the World Conservation Strategy as an overall guide for actions to conserve biological diversity;
- (3) engage in dialogues and exchanges of information with recipient countries which stress the importance of conserving biological diversity for the long-term economic benefit of those countries and which identify and focus on policies of those countries which directly or indirectly contribute to loss of biological diversity;
- (4) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity;
- (5) whenever possible, enter into long-term agreements in which the recipient country agrees to protect ecosystems or other wildlife habitats recommended for protection by relevant governmental or nongovernmental organizations or as a result of activities undertaken pursuant to paragraph (6), and the United States agrees to provide, subject to obtaining the necessary appropriations, additional assistance necessary for the establishment and maintenance of such protected areas;
- (6) support, as necessary and in cooperation with the appropriate governmental and nongovernmental organizations, efforts to identify and survey ecosystems in recipient countries worthy of protection;
- (7) cooperate with and support the relevant efforts of other agencies of the United States Government, including the United States Fish and Wildlife Service, the National Park Service, the Forest Service, and the Peace Corps;
- (8) review the Agency's environmental regulations and revise them as necessary to ensure that ongoing and proposed actions by the Agency do not inadvertently endanger wildlife species or their critical habitats, harm protected areas, or have other adverse impacts on biological diversity (and shall report to the Congress within a year after October 24, 1986, on the actions taken pursuant to this paragraph);
- (9) ensure that environmental profiles sponsored by the Agency include information needed for conservation of biological diversity; and
- (10) deny any direct or indirect assistance under this part for actions which significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas.

(h) Annual reports

Each annual report required by section 2394(a) of this title shall include, in a separate volume, a report on the implementation of this section. (Pub. L. 87-195, pt. I, Sec. 119, as added Pub. L. 98-164, title VII, Sec. 702, Nov. 22, 1983, 97 Stat. 1045; amended Pub. L. 99-529, title III, Sec. 302, Oct. 24, 1986, 100 Stat. 3017; Pub. L. 101-167, title V, Sec. 533(d)(4)(A), Nov. 21, 1989, 103 Stat. 1227.)

References to Subchapter I Deemed To Include Certain Parts of Subchapter II

References to subchapter I of this chapter are deemed to include parts IV (Sec. 2346 et seq.), VI (Sec. 2348 et seq.), and VIII (Sec. 2349aa et seq.) of subchapter II of this chapter, and references to subchapter II are deemed to exclude such parts. See section 202(b) of Pub. L. 92-226, set out as a note under section 2346 of this title, and sections 2348c and 2349aa-5 of this title.

Prior Provisions

A prior section 2151q, Pub. L. 87-195, pt. I, Sec. 119, as added Pub. L. 95-88, title I, Sec. 114, Aug. 3, 1977, 91 Stat. 538; amended Pub. L. 95-424, title I, Sec. 111, Oct. 6, 1978, 92 Stat. 948; Pub. L. 96-53, title I, Secs. 104(c), 107, Aug. 14, 1979, 93 Stat. 362, related to renewable and unconventional energy technologies, prior to repeal by Pub. L. 96-533, title III, Sec. 304(g), Dec. 16, 1980, 94 Stat. 3147.

#### Amendments

1989--Subsec. (b). Pub. L. 101-167 inserted `` , notwithstanding section 2420 of this title," after ``subchapter I of this chapter".

1986--Subsec. (c). Pub. L. 99-529 added subsec. (c) and struck out former subsec. (c) which read as follows: ``The Administrator of the Agency for International Development, in conjunction with the Secretary of State, the Secretary of the Interior, the Administrator of the Environmental Protection Agency, the Chairman of the Council on Environmental Quality, and the heads of other appropriate Government agencies, shall develop a United States strategy, including specific policies and programs, to protect and conserve biological diversity in developing countries."

Subsec. (d). Pub. L. 99-529 added subsec. (d) and struck out former subsec. (d) which read as follows: ``Each annual report required by section 2394(a) of this title shall include, in a separate volume, a report on the implementation of this subsection. Not later than one year after November 22, 1983, the President shall submit a comprehensive report to the Speaker of the House of Representatives and the chairman of the Committee on Foreign Relations of the Senate on the United States strategy to protect and conserve biological diversity in developing countries."

Subsecs. (e) to (h). Pub. L. 99-529 added subsecs. (e) to (h).

#### Short Title

For short title of title VII of Pub. L. 98-164, which enacted this section and amended section 2452 of this title, as the ``International Environment Protection Act of 1983", see section 701 of Pub. L. 98-164, set out as a Short Title of 1983 Amendment note under section 2151 of this title.

#### Increased International Cooperation To Protect Biological Diversity

Pub. L. 100-530, Oct. 25, 1988, 102 Stat. 2651, provided that Congress supports United States efforts, consistent with 22 U.S.C. 2151q(g), to initiate discussions to develop an international agreement to preserve biological diversity and calls upon the President to continue exerting United States leadership in order to achieve the earliest possible negotiation of an international convention to conserve biological diversity, and directed the President to submit a report to Congress on progress toward goal of negotiating such convention not later than one year after Oct. 25, 1988.

#### Section Referred to in Other Sections

This section is referred to in section 2191 of this title.

## ANNEX II

### INSTITUTIONS AND PERSONALITIES INTERVIEWED IN PREPARATION OF THE ROMANIAN BIODIVERSITY ASSESSMENT REPORT

- USAID Mission
- Romanian Parliament - Committee for Agriculture and Forestry - dr.ing., Deputy *Marian Ianculescu*
- Ministry of the Waters and Environment Protection, Bucharest - *Adriana Baz*, Head of Directorate for Biodiversity Conservation and Protected Areas; *Atena Groza*, Directorate for Biodiversity Conservation and Protected Areas
- National Regie of the forests ROMSILVA - ing. *Ilie Macarie*, Hunedoara County Forest Directorate; ing. *Guido Toniutti*, Retezat Forest District; ing. *Ioan Faur*, Territorial Inspectorate for Forest and Game Management Regime, Hunedoara; ing. *Dragos Mihai*, National Forest Administration, Protected Area Service
- GEF - *Florea Trifoi*, Program Manager
- Romanian Parliament, Committee for Public Administration, Physical Planning and Environment Equilibrium - *Ion Oltean*, Deputy
- Commission of Natural Monuments, Romanian Academy, Bucharest - prof.dr. *Dan Munteanu*, Head of Commission
- EPIQ Program, USAID Mission - prof.dr. *Vladimir Rojanschi*, Head of Local Office
- National Institute of Research and Designing "Danube Delta", Tulcea - dr. *Romulus Stiuca*, Director of Institute
- The Administration of the Biosphere Reserve "Danube Delta", Tulcea - dr. *Grigore Baboianu*, Deputy Director
- Managements Units of National Parks - *Erika Stanciu*, Retezat National Park Management Authority
- Faculty of Geography, University of Bucharest - prof.dr. *Maria Patroescu*
- Faculty of Geology, University of Bucharest - prof.dr. *Dan Grigorescu*, Department of Paleontology
- Faculty of Biology, University of Bucharest - conf.dr. *Dan Cogalniceanu*, Chair of Systemic Ecology and Natural Capital Management
- Faculty of Natural Science, Sibiu - prof.dr. *Constantin Dragulescu*, Chair of Botany, Dean of Faculty
- Faculty of Biology-Geography, Cluj-Napoca - lector dr. *Ioan Ghira*, Chair of Ecology and Genetics
- Forestry Faculty, Transilvania University, Brasov - lector dr. *Ion Abrudan*
- University of the Black Sea, Constanta - prof.dr. *Marian Traian Gomoiu*

- National Museum of Natural History “*Grigore Antipa*”, Bucharest - *Dorel Rusti*, Department of Entomology
- Museum of Natural Science, Sibiu - *Doru Banaduc*, Department of Zoology
- Hygiene and Public Health Institute -dr. *Klaus Fabricius*, Deputy Director
- Institute of Biology - dr. *Marin Falca*, Director of Institute
- 
- Institute of Geography - dr. *Constantin Drugescu*, Department of Biogeography
- Institute for Forest Research and management Planning - dr. *Ovidiu Ionescu*, Deputy Director; ing. *Ferko Jeno*
- Local Council, Hateg, Hunedoara County - *Ioan Glodeanu*, Mayor
- Romanian Association of the Environmental Journalists, Bucharest - *Dan Stoica*
- Romanian Association for Ecological Management and Sustainable Development -dr.ing. *Gheorghe Manea*
- AIDRom Foundation - *Istvan Sido*
- Regional Environmental Centre for Central and East Europe, Local Office, Bucharest - *Anca Tofan*, Head of Local Office

## ANNEX III

**MAIN GROUPS OF ECOSYSTEMIC FORMATIONS OF ROMANIA, NUMBER OF ECOSYSTEM TYPES, THEIR PRESENT STATUS AND TERRITORIAL DISTRIBUTION**

Nr.	Ecosystemic formations	Nr. of Ecosystems Types	Present status	Territorial Distribution (Occurence)
1	Boreal coniferous forest	41	underived primary seminatural, partly natural	Uninterrupted main territory in the Eastern Carpathians and interrupted in the Middle Carpathians between 1,200 - 1,800 m
2	Mesophyllous broad-leaved forests	50	underived primary semi-natural, partly natural	Uninterrupted territory in all the mountains and hills between 300 - 1,200 (1,400) m and partially in South and West of Romania
3	Higrophyllous broad-leaved forest	24	underived and derived primary semi-natural	Main territory in the large floodplains from the plain to which it is added the hill and mountain floodplain
4	Xerotherme broad-leaved forests	36	underived and derived primary semi-natural	Main territory in the plain and low hills from the South, West and centre of Romania with a dry climate
5	Cryophyllous alpine grasslands	16	primary natural	Fragmented territory, the alpine peaks more than 2,000 - 2,200 m high
6	Mesophyllous grasslands	67	underived and derived secondary semi-natural	Territory overlapping the boreal and mesophyllous forests (between 500 - 1,800 m)
7	Higrophyllous grasslands	151	underived and derived secondary semi-natural	Territory overlapping the hygrophyllous forests from the floodplains
8	Xerophyllous and xerotherme grasslands	115	derived primary natural	Main territory in the low plain from the East, South and West of Romania
9	Psamophyllous grasslands	19	underived and derived primary semi-natural, partly natural	Very restricted territory of about 100,000 ha in the NW of Romania (Carei), SW (Danube terraces) and S (the terraces Vadu Ialomitei, Buzau, Birlad) the Danube Delta.
10	Halophyllous grasslands	58	underived semi-natural natural	Restricted territory to the halomorphe soils in the Western Plain and the Romanian Plain and the seaside
11	Saxicole and petrophyllous formations	99	primary natural	Micro-territories in the alpine and subalpine territories (partly in the boreal and mesophyllous broad-leaved ones) from the Carpathians.
12	Mountain and subalpine herbs	35	primary natural	Territory overlapping the inferior subalpine and boreal mesophyllous forests (the superior part)
13	Cryophyllous small alpine bushes	6	natural	Fragmented territory on the alpine peaks ... between 2,000 - 2,200 m)
14	Subalpine bushes	6	primary natural underived and derived semi-natural	Fragmented territories in the subalpine layer of the Carpathians (1,800-2,200 m)
15	Mesophyllous and submesophyllous bushes	20	secondary natural	Fragmented territory overlapping that of the mesophyllous and partly the xerotherme forests
16	Xerophyllous bushes (steppic)	4	primary and secondary natural	Territory overlapping the xerophyllous grasslands which are now almost totally destroyed
17	Higrophyllous bushes	11	primary natural	In floodplains and swamps

## ANNEX IV

### NATURAL HABITAT TYPES WHOSE CONSERVATION REQUIRES THE DESIGNATION OF SPECIAL AREAS OF CONSERVATION

#### 1. Coastal habitats, sand dunes

Sandbanks which are slightly covered by sea water all the time  
Coastal lagoons and sandbanks  
Perennial vegetation of stony banks  
*Salicornia* and other annuals colonizing mud and sand  
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)  
Inland salt meadows  
Pannonic salt steppes and salt marshes  
Dry sand heaths with *Calluna* and *Genista*  
Dry sand heaths with *Calluna* and *Empetrum nigrum*  
Inland dunes with open *Corynephorus* and *Agrostis* grasslands  
Pannonic inland dunes  
Embryonic shifting dunes  
Shifting dunes along the shoreline ("white dunes")  
Fixed coastal dunes with herbaceous vegetation ("grey dunes")  
Decalcified fix dunes with *Empetrum nigrum*  
Dunes with *Hippophaë rhamnoides*  
Wooded dunes of the Atlantic, Continental and Boreal region  
Humid dune slacks

#### 2. Freshwater habitats

Oligotrophic waters containing very few minerals  
Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*  
Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.  
Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* – type vegetation  
Natural dystrophic lakes and ponds  
Alpine rivers and the herbaceous vegetation along their banks  
Alpine rivers and their ligneous vegetation with *Myricaria germanica*  
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation  
Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p.

#### 3. Heath and scrub

Alpine and Boreal heaths  
Wet heaths with *Erica tetralix*  
Dry heaths  
Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo-Rhododendretum hirsuti*)  
*Juniperus communis* formations on heaths or calcareous grassland  
Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*  
Xeric sand calcareous grassland  
Siliceous alpine and boreal grasslands  
Alpine and subalpine calcareous grasslands  
Semi-natural dry grasslands and scrubland facies on calcareous substrates (important orchid sites)  
Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*  
Species-rich *Nardus* grasslands, on silicious substrates in mountain areas  
Sub-Pannonic steppic grasslands  
Pannonic loess steppic grasslands  
Pannonic sand steppes  
*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)  
Tall-herb humid meadows  
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels  
Alluvial meadows of river valleys of the *Cnidion dubii*  
Northern boreal alluvial meadows  
Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

Mountain hay meadows  
Wooded meadows

**4. Bogs and mires and fens**

Active raised bogs  
Degraded raised bogs still capable of natural regeneration  
Blanket bogs (if active bog)  
Depressions on peat substrates  
Mineral-rich springs and springfens  
Calcareous fens with *Cladium mariscus*  
Petrifying springs with tufa formation (*Cratoneurion*)  
Alkaline fens  
Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*

**5. Rocky habitats and caves**

Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)  
Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)  
Medio-European upland siliceous screes  
Medio-European calcareous scree of hill and montane levels  
Calcareous rocky slopes with chasmophytic vegetation  
Siliceous rocky slopes with chasmophytic vegetation  
Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dillenii*  
Limestone pavements  
Caves not open to the public  
Fields of lava and natural excavations

**6. Forests**

Hemiboreal natural old broad-leaved deciduous forest rich in epiphytes  
Wooded pastures  
Deciduous swamp woods  
*Luzulo-Fagetum* beech forests  
*Asperulo-Fagetum* beech forests  
Medio-European subalpine beech woods with *Acer*  
Medio-European limestone beech forests of the *Cephalanthero-Fagion*  
Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*  
*Galio-Carpinetum* oak-hornbeam forests  
*Tilio-Acerion* forests of slopes, screes and ravines  
Old acidophilous oak woods with *Quercus robur* on sandy plains  
Thermophilous *Fraxinus angustifolia* woods  
Bog woodland  
Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)  
Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along to the great rivers (*Ulmion minoris*)  
Pannonic woods with *Quercus petraea* and *Carpinus betulus*  
Pannonian woods with *Quercus pubescens*  
Euro-Siberian steppic woods with *Quercus robur*  
Acidophilous *Picea* forests of the montane to alpine levels  
Alpine *Larix decidua* and/or *Pinus cembra* forests  
*Castanea sativa* woods  
*Quercus frainetto* woods  
*Salix alba* and *Populus alba* galleries  
*Pinus sylvestris* forests on limestone

ANNEX V  
ROMANIAN MEADOWS DISTRIBUTION

Steppes	90,000 ha	2.7%
Silvosteppes	250,000 ha	7.3%
Nemoral meadows	1,400,000 ha	41%
Boreal meadows	1,000,000 ha	29%
Subalpine meadows	66,000 ha	2%
Alpine meadows	40,000 ha	1.3%
Alluvial meadows	500,000 ha	14.7%
Sandy meadows	10,000 ha	0.4%
Halophilous meadows	50,000 ha	1.6%
TOTAL	3,406,000 ha	100 %

Tucra I. et colab. 1987 Principalele tipuri de pajisti din RS Romania (The Romanian main meadows type).  
Ministry of Agriculture, Academy of Agriculture and Forestry, Bucharest

Romanian Meadow Zones

1. Steppes
  2. Silvosteppes
  3. Deciduous oak forests (nemoral zone)
  4. Deciduous beech forests ( nemoral layer)
  5. Coniferous forests (boreal zone)
  6. Bushes with *Pinus mugo* (subalpine layer)
  7. Alpine meadows layer
- Inter-zone meadows:
8. Alluvial meadows
  9. Halophilous meadows
  10. Sand steppes-meadows

**Steppes**

East Baragan, South Moldova, central Dobrogea  
*Festuca, Stipa, Poa, Thymus, Botriochloa Euphorbia, Cynodon, Agropyron*  
Series: *Festuca valesiaca, Botriochloa ischaemum*

**Silvosteppes** - wooded meadows

Jijia Depression, Barlad plateau, Buzau, Dobrogea, west Baragan, Burnas plaine, Oltenia plaine, Timis plaine, Cris plaine  
*Festuca, Stipa, Poa, Thymus, Botriochloa Euphorbia, Cynodon, Agropyron*  
Series: *Festuca valesiaca, Festuca pseudovina, Chrysopogon gryllus, Botriochloa ischaemum*

**Nemoral zone**

Transsylvania, Tirnava Plateau, Suceava Plateau  
*Festuca, Stipa, Danthonia, Bromus, Chrysopogon, Brachypodium, Lolium, Anthoxanthum*  
Series : *Festuca rupicola, Botriochloa ischaemum*  
Muntenia and Oltenia plaine, Banat, Crisana  
*Poa, Lolium, Festuca, Agrostis, Chrysopogon, Botriochloa, Cynodon*  
Series : *Poa pratensis* ssp. *angustifolia* (in the south), *Festuca valesiaca-Festuca rupicola* (in the west),  
*Chrysopogon gryllus, Botriochloa ischaemum*

**Nemoral layer**

Hills, Moldova Plateau  
*Agrostis, Brachypodium, Carex, Sesleria, Lolium, Festuca, Nardus, Botriochloa, Chrysopogon, Holcus, Polygonum, Juncus, Deschampsia, Cynosurus, Danthonia, Arrhenatherum, Trisetum, Bruckenthalia, Achillea, Juniperus, Rumex, Phleum, Epilobium, Calamagrostis*  
Series : *Agrostis tenuis, Botriochloa ischaemum, Agrostis tenuis-Festuca rubra, Nardus stricta, Rumex alpinus*

**Boreal layer**

Carpathian Mountains  
*Festuca, Agrostis, Poa, Juncus, Nardus, Veratrum, Vaccinium, Juniperus Calluna, Hieracium, Deschampsia, Rumex, Sesleria, eriophorum, Calamagrostis*  
Series: *Festuca rubra, Festuca rupicola* ssp. *saxatilis, Rumex alpinus*



**Subalpine layer**

Mountains

*Festuca, Poa, Agrostis, Pinus mugo, Erica, Nardus, Sesleria*

Series: *Festuca ovina* ssp. *sudetica, Nardus stricta, Festuca amethystina*

**Alpine layer**

*Carex, Festuca, Sesleria, Elyna, Juncus, Oreochloa*

Series: *Juncus trifidus*

**Alluvial meadows**

Floodplains of the rivers

*Lolium, Festuca, Arrhenatherum, Agrostis, Deschampsia, Poa, Alopecurus, Agropyron, Juncus, Sesleria, Nardus, Molinia, Phragmites, Bolboschaenus, Scirpus, Carex, Eriophorum, Cirsium*

Series: *Poa pratensis, Agrostis stolonifera, Deschampsia caespitosa*

**Halophilous meadows**

Romanian Plaine, West Plaine, Moldova Plateau, some areas in Transsylvania

*Puccinella, Trifolium, Carex, Cryspis, Juncus, Limonium, Beckmaniia, Salicornia, Halimione*

Series: *Puccinella limosa, Salicornia europaea*

**Sandy meadows**

Carei Plaine, Oltenia Plaine, Tecuci Plaine, Romanian Plaine, Danube Delta, Sea shore of Black Sea

*Festuca, Bromus, Cynodon, Carex, Elymus, Mollugo, Secale*

Series: *Festuca vaginata, Elymus giganteus*

ANNEX VI  
THE LIST OF ENDEMIC AND SUBENDEMIC PLANT AND ANIMAL SPECIES FROM ROMANIA

**A. ENDEMIC PLANT SPECIES**

No	Species	Geographic area	Freq.	Habitat
0	1	2	3	4
1	<i>Andryala</i> ( <i>Pietrosia</i> ) <i>levitomentosa</i>	the Eastern Carp <sup>1</sup> (Bistritei M <sup>2</sup> )	v.rare <sup>5</sup>	r-r <sup>8</sup>
2	<i>Anthemis</i> <i>carpatica</i> ssp. <i>pyrethriformis</i>	the Eastern Carp	spor <sup>6</sup>	mead <sup>9</sup>
3	<i>Aquilegia</i> <i>nigricans</i> ssp. <i>subscaposa</i>	the Rom <sup>3</sup> Carp	spor	mead
4	<i>Astragalus</i> <i>excapus</i> ssp. <i>transsilvanicus</i>	Cluj, Alba cs	rare	mead
5	<i>Astragalus</i> <i>peterfii</i>	Cluj c <sup>4</sup>	rare	mead
6	<i>Astragalus</i> <i>pseudopurpureus</i>	Bacau, Bicz cs	rare	r-r
7	<i>Astragalus</i> <i>roemeri</i>	the Rom Carp	rare	r-r
8	<i>Athamanta</i> <i>turbith</i> ssp. <i>hungarica</i>	the Southern Carp	rare	r-r
9	<i>Barbarea</i> <i>lepusnica</i>	the Southern Carp (Retezat, Godeanu Ms)	rare	wl <sup>10</sup>
10	<i>Campanula</i> <i>romanica</i>	Romania (Dobrogea)	spor	r-r
11	<i>Carduus</i> <i>kernerii</i> ssp. <i>lobulatifolius</i>	the Godeanu M	spor	mead
12	<i>Centaurea</i> <i>jankae</i>	Tulcea c	v.rare	mead
13	<i>Centaurea</i> <i>phrygia</i> ssp. <i>rarauensis</i>	the Rarau, Harghita Ms	rare	mead
14	<i>Centaurea</i> <i>phrygia</i> ssp. <i>retezatensis</i>	the Retezat M	rare	mead
15	<i>Centaurea</i> <i>pinnatifida</i>	the Rom Carp	spor	mead
16	<i>Centaurea</i> <i>pontica</i>	Romania (seaside)	rare	s-r <sup>11</sup>
17	<i>Centaurea</i> <i>trichocephala</i> ssp. <i>simonkaiana</i>	Romania (Transsylvania, Banat)	spor	mead, gl <sup>12</sup>
18	<i>Cephalaria</i> <i>radiata</i>	Romania (Transsylvania, Banat)	rare	mead, bs <sub>13</sub>
19	<i>Cerastium</i> <i>transsilvanicum</i>	the Southern, Eastern Carp	spor	mead
20	<i>Delphinium</i> <i>simonkaianum</i>	the Western, Eastern Carp (the Gilau, Trascau, Harghita Ms)	spor	r-r
21	<i>Dianthus</i> <i>callizonus</i>	Piatra Craiului	rare	mead, r-r
22	<i>Dianthus</i> <i>glacialis</i> ssp. <i>gelidus</i>	the Southern, Eastern Carp	spor	mead
23	<i>Dianthus</i> <i>henteri</i>	the Southern Carp	spor	mead
24	<i>Dianthus</i> <i>spiculifolius</i> ( <i>D. petraeus</i> ssp. <i>spiculifolius</i> )	the Rom Carp	freq. <sup>7</sup>	mead, r-r
25	<i>Dianthus</i> <i>tenuifolius</i> ( <i>D. carthusianorum</i> ssp. <i>tenuifolius</i> )	the Rom Carp	freq.	mead, r-r
26	<i>Draba</i> <i>dorneri</i>	the Retezat Ms	rare	r-r
27	<i>Draba</i> <i>haynaldii</i>	the Southern, Eastern Carp	spor	r-r
28	<i>Draba</i> <i>simonkaiana</i>	the Paring, Retezat Ms	rare	r-r
29	<i>Festuca</i> <i>bucegiensis</i> ( <i>glacialis</i> )	the Southern Carp (the Bucegi, Fagaras, Paring Ms)	spor	mead, bs
30	<i>Festuca</i> <i>nitida</i> ssp. <i>flaccida</i>	the Southern, Eastern Carp	spor	mead
31	<i>Festuca</i> <i>pachyphylla</i>	the Southern, Eastern Carp	spor	mead, r-r
32	<i>Festuca</i> <i>versicolor</i> ssp. <i>dominii</i>	the Rodnei Ms	freq.	mead, r-r
33	<i>Fumaria</i> <i>jankae</i>	Bihor c	v.rare	mead
34	<i>Galium</i> <i>baillonii</i>	the Southern Carp (Mehedinti, Gorj, Vilcea, Sibiu cs)	rare	for <sup>14</sup> , r-r
35	<i>Helictotrichon</i> <i>decorum</i>	the Rom Carp	spor	r-r
36	<i>Hepatica</i> <i>transsilvanica</i>	the Southern, Eastern Carp (the Birsei Ms)	spor	for, bs
37	<i>Hesperis</i> <i>matronalis</i> ssp. <i>moniliformis</i>	the Southern, Eastern Carp	spor	bs, gl,

				mead
38	<i>Hesperis oblongiflora</i>	the Southern, Eastern Carp (the Birsei Ms)	spor	mead
39	<i>Hieracium praebiharicum</i>	Alba c	rare	mead
40	<i>Linum uninerve</i>	Harghita, Caras-Severin, Mehedinti, Gorj cs	spor	r-r
41	<i>Lychinis nivalis</i> ( <i>Polyschemone</i> ( <i>Silene</i> ) <i>nivalis</i> )	the Rodnei Ms	rare	mead
42	<i>Minuartia cataractarum</i> ( <i>M.hirsuta</i> ssp. <i>cataractarum</i> )	Portile de Fier	rare	r-r
43	<i>Onobrychis montana</i> ssp. <i>transsilvanica</i> ( <i>O.transsilvanica</i> )	the Southern, Eastern Carp	spor	r-r
44	<i>Ornitogalum orthophillum</i> ssp. <i>acuminatum</i>	Brasov c - Timpa	rare	gl
45	<i>Ornitogalum orthophillum</i> ssp. <i>samophilum</i>	Ialomita c - Sacuieni	rare	s-r
46	<i>Papaver corona-sancti-stephani</i> ( <i>P.pyrenaicum</i> )	the Southern, Eastern Carp	rare	r-r
47	<i>Poa granitica</i> ssp. <i>disparilis</i>	the Southern, Eastern Carp	spor	mead
48	<i>Primula auricula</i> ssp. <i>serratifolia</i>	the Southern Carp (Vilcan, Godeanu, Cernei Ms)	rare	mead, r-r
49	<i>Primula wulfeniana</i> ssp. <i>baumgarteniana</i>	the Southern Carp (the Postavaru, Piatra Craiului Ms)	rare	mead
50	<i>Salvia transsilvanica</i>	Maramures, Alba, Harghita, Hunedoara, Arges, Buzau cs)	spor	mead
51	<i>Saxifraga mutata</i> ssp. <i>demissa</i> ( <i>S.demissa</i> )	the Southern Carp (the Birsei Ms)	spor	r-r
52	<i>Silene dinarica</i>	the Southern Carp (Fagaras, Cozia, Godeanu, Bucegi, Cluj)	rare	mead
53	<i>Sorbus bordasii</i>	the Mehedinti, Cernei Ms	rare	r-r
54	<i>Thesium kernerianum</i>	the Ciucas, Bucegi, Piatra Craiului Ms	spor	mead, r-r
55	<i>Thelapsi dacicum</i> ssp. <i>banaticum</i>	the Southern Carp (the Paring, Mehedinti, Tarcu, Godeanu Ms)	spor	mead, bs
56	<i>Thymus bihariensis</i> ( <i>marginatus</i> )	the Rom Carp	spor	mead
57	<i>Viola jooi</i>	Transsylvania, Banat, Olt, Muntenia, Moldavia	spor	r-r

Legend: 1 - Carpathians	5 - very rare	9 - rocky-region	13 - bushes
2 - Mountain	6 - sporadic	10 - wetlands	14 - forest
3 - Romanian	7 - frequent	11 - sandy-regions	
4 - county	8 - meadow	12 - glades	

## B. SUBENDEMIC PLANT SPECIES

No.	Species	The Romanian area
1	<i>Achillea coarctata</i> ssp. <i>milefoliata</i>	
2	<i>Achillea schurii</i> ( <i>A. oxyloba</i> ssp. <i>schurii</i> )	The Southern, Eastern Carpathian <sup>1</sup>
3	<i>Aconitum moldavicum</i>	The Carpathian.
4	<i>Aconitum tauricum</i> ssp. <i>hunyadense</i>	The Rom <sup>2</sup> Carpathian
5	<i>Adonis transsylvanica</i> ( <i>hibrida</i> )	
6	<i>Agropyron brandzae</i>	
7	<i>Agrostis moldavica</i>	
8	<i>Alchemilla dolichotoma</i>	

9	<i>Alchemilla sooi</i>	Poiana Brasov
10	<i>Allium fuscum</i> ssp. <i>fussi</i>	the Rom <sup>2</sup> Carpathian.
11	<i>Alopecurus laguriformis</i>	the Southern, Eastern Carpathian.
12	<i>Alyssum borzeanum</i>	
13	<i>Alyssum obtusifolium</i> ssp. <i>caliacre</i>	
14	<i>Androsace villosa</i> ssp. <i>arachnoidea</i>	the Southern, Eastern Rom. Carpathian
15	<i>Antemis tinctoria</i> ssp. <i>fussii</i>	
16	<i>Aquilegia transsilvanica</i>	the Carpathian
17	<i>Armeria barcensis</i> ( <i>A. maritima</i> )	
18	<i>Armeria pocutica</i> ( <i>elongata</i> )	the Northern Carpathian
19	<i>Asperula Carpathianatica</i>	the Eastern Carpathian
20	<i>Astragalus australis</i> ssp. <i>bucsecsii</i>	
21	<i>Aubrietia intermedia</i> ssp. <i>falcata</i>	the Carpathian
22	<i>Betula pubescens</i> ssp. <i>Carpathianatica</i>	the Carpathian
23	<i>Campanula Carpathianatica</i>	the Carpathian
24	<i>Campanula rotundifolia</i> ssp. <i>polymorpha</i>	the Carpathian
25	<i>Campanula serrata</i> ( <i>napuligera</i> )	the Carpathian
26	<i>Campanula transsilvanica</i>	
27	<i>Cardamine</i> ( <i>Dentaria</i> ) <i>glanduligera</i> ( <i>glandulosa</i> )	the Carpathian
28	<i>Cardaminopsis neglecta</i>	the Carpathian
29	<i>Centaurea globurensis</i>	
30	<i>Centaurea haynaldiformis</i>	
31	<i>Centaurea phrygia</i> ssp. <i>Carpathianatica</i>	Romania
32	<i>Centaurea pinnatifida</i> ssp. <i>sooana</i>	
33	<i>Centaurea triumfetti</i> ssp. <i>pinnatifida</i>	
34	<i>Cephalaria uralensis</i> ssp. <i>multifida</i>	
35	<i>Chenopodium wolffii</i>	
36	<i>Chysosplenium alpinum</i> ( <i>C. oppositifolium</i> )	the Carpathian
37	<i>Cochlearia borzeana</i>	the Eastern Carpathian - rare
38	<i>Colchicum haynaldii</i>	the Caras Severin, Mehedinti cs <sup>3</sup>
39	<i>Corydalis solida</i> ssp. <i>slivenensis</i>	
40	<i>Dactylorhiza cordigera</i> ssp. <i>sicolorum</i>	the Eastern, Northern Carpathian
41	<i>Dactylorhiza maculata</i> ssp. <i>schurii</i>	the Carpathian
42	<i>Dianthus banaticus</i>	the Caras Severin, Mehedinti cs
43	<i>Dianthus campestris</i> ssp. <i>serbanii</i>	
44	<i>Dianthus dobrogensis</i>	Dobrogea - rare
45	<i>Dianthus giganteus</i> ssp. <i>banaticus</i>	
46	<i>Dianthus guttatus</i> ssp. <i>racovitzae</i>	rare
47	<i>Draba kotschyi</i>	
48	<i>Erigeron acer</i> ssp. <i>polymorpha</i>	the Carpathian
49	<i>Erigeron nanus</i>	the Carpathian
50	<i>Eritrichium nanum</i> ssp. <i>jankae</i>	the Carpathian
51	<i>Erysimum hungaricum</i>	
52	<i>Erysimum witmannii</i>	the Southern, Eastern Carpathian
53	<i>Erytronium dens-canis</i> ssp. <i>niveum</i>	
54	<i>Festuca Carpathianatica</i>	the Southern, Eastern Carpathian
55	<i>Festuca gautieri</i> ssp. <i>lutea</i>	the Rom Carpathian
56	<i>Festuca porcii</i>	the Carpathian
57	<i>Festuca rupicola</i> ssp. <i>saxatilis</i>	the Southern, Eastern Carpathian
58	<i>Festuca scheuchzeriformis</i>	
59	<i>Festuca tatrae</i> ( <i>F. amethystina</i> ssp. <i>tatrae</i> )	the Carpathian
60	<i>Festuca wagneri</i>	
61	<i>Galium moldavicum</i>	

62	<i>Genista tinctoria</i> ssp. <i>oligosperma</i>	the Southern Carpathian
63	<i>Gentiana phlogifolia</i> ( <i>G. cruciata</i> ssp. <i>phlogifolia</i> )	the Southern, Eastern Carpathian
64	<i>geranium sylvaticum</i> ssp. <i>coeruleatum</i>	
65	<i>Gypsophila petraea</i>	
66	<i>Heracleum Carpathianaticum</i>	the Carpathian
67	<i>Heracleum palmatum</i>	the Rom Carpathian
68	<i>Hesperis nivea</i>	the Southern, Eastern Carpathian
69	<i>Hieracium borbasii</i>	Romania
70	<i>Hieracium fogaresense</i>	the Fagaras Mountain
71	<i>Hieracium kotschyianum</i>	Romania
72	<i>Hieracium magocsyanum</i>	the Retezat, Godeanu Mountains
73	<i>Hieracium negoiense</i>	
74	<i>Hieracium pojoritense</i>	the Eastern Carpathian
75	<i>Hieracium porphiriticum</i>	the Bihor, Mare Mountains
76	<i>Hieracium telekianum</i>	Harghita c
77	<i>Hypericum umbellatum</i>	Alba c
78	<i>Iris graminea</i> ssp. <i>brindzae</i>	
79	<i>Iris reinchenbachii</i>	
80	<i>Jurinea mollis</i> ssp. <i>transsilvanica</i>	Transsylvania
81	<i>Knautia tulcensis</i>	
82	<i>Koeleria macrantha</i> ssp. <i>transsilvanica</i>	the Carpathian
83	<i>Larix decidua</i> ssp. <i>polonica</i>	the Carpathian
84	<i>Lathyrus transsilvanicus</i>	
85	<i>Leontodon montanum</i> ssp. <i>pseudotaraxacii</i>	the Carpathian
86	<i>Leontodon repens</i>	the Carpathian
87	<i>Lilium jankae</i>	
88	<i>Limonium bellidifolium</i>	
89	<i>Linaria bessarabica</i>	Buzau, Teleorman, Olt, Gorj cs
90	<i>Linum bessarabicum</i>	
91	<i>Linum borzeanum</i>	
92	<i>Linum perenne</i> ssp. <i>extraaxilare</i>	
93	<i>Melampyrum herbichii</i>	the Carpathian
94	<i>Melampyrum saxosum</i>	the Carpathian
95	<i>Melilotus arenaria</i>	Constanta c
96	<i>Micromeria pulegium</i>	
97	<i>Minuartia bilykiana</i>	
98	<i>Minuartia graminifolia</i> ssp. <i>hungarica</i>	
99	<i>Minuartia hirsuta</i> ssp. <i>catractarum</i>	Romania
100	<i>Minuartia verna</i> ssp. <i>oxypetala</i>	the Rodnei Mountains
101	<i>Moehringia grisebachii</i>	
102	<i>Moehringia jankae</i>	
103	<i>Myosotis transsilvanica</i>	
104	<i>Onosma arenaria</i> (ssp. <i>arenaria</i> )	Transsylvania
105	<i>Onosma heterophilla</i>	
106	<i>Onosma pseudarenaria</i>	Transsylvania
107	<i>Ornithogalum oreoides</i>	
108	<i>Oxytropis Carpathianatica</i>	the Carpathian
109	<i>Paeonia officinalis</i> ssp. <i>banatica</i>	
110	<i>Papaver meoticum</i>	
111	<i>Pedicularis baumgartenii</i>	the Rom Carpathian
112	<i>Pedicularis limnogenia</i>	
113	<i>Peucedanum longifolium</i>	Romania
114	<i>Peucedanum rochelimum</i>	Romania

115	<i>Phyteuma tetramerum</i>	the Carpathian
116	<i>Phyteuma wagneri</i>	the Carpathian
117	<i>Pinus nigra</i> ssp. <i>banatica</i>	the Southern Carpathian
118	<i>Plantago schwarzenbergiana</i>	Romania
119	<i>Poa laxa</i> ssp. <i>pruinosa</i>	
120	<i>Poa molinerii</i> ssp. <i>glacialis</i>	
121	<i>Poa pannonica</i>	
122	<i>Poa rehmannii</i>	the Carpathian
123	<i>Polygala supina</i> ssp. <i>hospila</i>	
124	<i>Potentilla chrysantha</i> ssp. <i>pastorum</i>	
125	<i>Potentilla emilii-popii</i>	Romania
126	<i>Potentilla hynaldiana</i>	
127	<i>Prangos ferulacea</i> ssp. <i>carinata</i>	Mehedinti (Varciorova) c
128	<i>Primula elatior</i> ssp. <i>leucophylla</i>	the Eastern Carpathian
129	<i>Pulmonaria filarszkyana</i>	the Northern, Eastern Carpathian
130	<i>Pulsatilla halleri</i> ssp. <i>slavica</i>	the Northern Carpathian (Marzesti)
131	<i>Pulsatilla pratensis</i> ssp. <i>flavescens</i>	
132	<i>Pyrola Carpathianatica</i>	the Carpathian
133	<i>Ranunculus Carpathianaticus</i>	the Southern, Eastern Carpathian
134	<i>Ranunculus flabellifolius</i>	Caras-Severin c
135	<i>Rhinanthus borbassii</i>	
136	<i>Rhinanthus wagneri</i>	
137	<i>Rosa coziae</i>	Cozia, Capatinii Mountains
138	<i>Rubus chloroclados</i> ssp. <i>transsilvanicus</i>	Romania
139	<i>Saussurea porcii</i>	the Northern Carpathian
140	<i>Scabiosa</i> ssp. <i>barbata</i>	the Rom Carpathian
141	<i>Scabiosa pseudobanatica</i> ssp. <i>barbata</i>	
142	<i>Scabiosa pseudobanatica</i> ssp. <i>pseudobanatica</i>	
143	<i>Serratula bulgarica</i> ( <i>S. caput najae</i> )	
144	<i>Seseli gracile</i>	Transsylvania, Oltenia, Muntenia
145	<i>Seseli rigidum</i>	
146	<i>Sesleria bielzi</i>	
147	<i>Sesleria heufferana</i>	the Carpathian
148	<i>Silene</i> ( <i>Melandrium</i> ) <i>zawadskii</i>	the Eastern Carpathian
149	<i>Silene conica</i>	
150	<i>Silene cserei</i>	
151	<i>Silene lerchenfeldiana</i>	
152	<i>Silene nutans</i> ( <i>dubia</i> )	the Rom Carpathian
153	<i>Sorbus dacica</i>	
154	<i>Sorbus paxiana</i>	
155	<i>Stipa crassiculmis</i> ssp. <i>heterotricha</i>	
156	<i>Stipa danubialis</i>	Mehedinti c
157	<i>Symphyandra wanneri</i>	
158	<i>Symphytum cordatum</i>	the Carpathian
159	<i>Syringa josikaea</i>	the Western, Eastern, Northern Carpathian, Cluj
160	<i>Thlapsi dacicum</i>	the Southern, Eastern Carpathian
161	<i>Thlapsi dacicum</i> ssp. <i>dacicum</i>	the Southern, Eastern Carpathian
162	<i>Thlapsi jankae</i>	
163	<i>Thlapsi pawlowskii</i>	
164	<i>Thyrrus comosus</i>	the Rom Carpathian
165	<i>Thyrrus pulcherrimus</i>	the Southern, Eastern, Northern Carpathian
166	<i>Trisetum fuscum</i>	the Carpathian

167	<i>Trisetum macrotrichum</i>	the Carpathian
168	<i>Trollius europaeus</i> ssp. <i>transsilvanicus</i>	
169	<i>Tulipa hungarica</i> (ssp. <i>undulatifolia</i> )	Caras-Severin c
170	<i>Verbascum glabratum</i> ssp. <i>brandzae</i>	
171	<i>Verbascum purpureum</i>	

Legend: 1- Carpathians  
2- Romanian  
c- county

• by Ciocarlan 1988-90, Negrean and assistants 1989, Dihoru and assistants 1994, Oltean and assistants 1994

### C. ENDEMIC AND SUBENDEMIC ANIMAL SPECIES

#### Gasteropoda

*Deroceas geticus*  
*Daudebardia rufa getica*  
*Daudebardia transsylvanica*  
*Semilimax kotulae*  
*Phaenecolimax bielzii*  
*Vitrea transsylvanica*  
*Helicigona banatica*  
*Helicigona hesseri*  
*Trichina transsylvanica*  
*Monacha vicina*  
*Agardhia bielzii*  
*Wastus venerabilis*  
*Cochlodina transsylvanica*  
*Pseudoalinda montana*  
*Pseudoalinda jugularis*  
*Pseudoalinda falax*  
*Alopi canescens*  
*Alopi nixa*  
*Alopi straminicolis*  
*Acme polita oedogira*  
*Acme similis*

#### Chilopoda

*Scutigera coleoptrata*  
*Eupolybotrus transsylvanicus*

#### Pisces

*Gasterosteus aculeatus crenobiontus*  
*Gobio kessleri antipai*  
*Gobio kessleri banaticus*  
*Romanichthys valsanicola*  
*Sabanejewia aurata radnensis*  
*Sabanejewia aurata vallachica*  
*Sabanejewia romanica*  
*Scardinius erythrophthalmus racovitzae*  
*Zingel streber nerensis*

#### Coleoptera

*Carabus obsoletus carpaticus*  
*Carabus arvensis carpathus*  
*Carabus planicollis*  
*Nebria transsylvanica*  
*Trechus carpathicus*  
*Duvaliopsis transsylvanicus*

#### Orthoptera

*Isophia braevipennis*  
*Poecimilon affinis*  
*Mezotettix transsylvanicus*  
*Isophia haozi*  
*Odontopodissima carpathica*  
*Chortippus ocroleucus*

#### Lepidoptera

*Erebia pharte romaniae*  
*Erebia prone*  
*Psodos dioszghy*  
*Tortrix wassiana*

#### Scorpiones

*Euscorpium carpathicus*

#### Amphibia

*Triturus cristatus dobrogicus*  
*Triturus montandoni*  
*Triturus vulgaris ampelensis*

#### Reptilia

*Lacerta trilineata dobrogica*  
*Vipera ursinii moldavica*

#### Aves

*Dendrocopus leucotus*  
*Parus montanus transsylvanicus*

## ANNEX VII

## PROTECTED AREAS IN ROMANIA

## A. STATISTICS

IUCN Management Category	Number
I. Scientific Reserves	<b>43</b>
II. National Parks	<b>12</b>
III. Natural Monuments	<b>135</b>
IV. Natural Reserves	<b>373</b> divided in: <b>122</b> botanical, <b>15</b> zoological, <b>65</b> geological, <b>58</b> speleological <b>52</b> paleontological, <b>51</b> forests <b>155</b> mixt
V. Landscape Reserves	<b>18</b>
IX. Biosphere Reserves	<b>3</b>
X. World Natural Heritage	<b>1</b>
Ramsar Site	<b>2</b>

## B. LIST OF PROTECTED AREAS

## 1.0. Biosphere Reserves, national or natural parks

Position	Name	Surface (ha)	County
A	Delta Dunarii	580.000,00	Tulcea, Constanta
B	Domogled-Valea Cernei	60.100,00	Caras-Severin, Mehedinti, Gorj
C	Retezat	38.047,00	Hunedoara
D	Portile de Fier	115.655,80	Caras-Severin, Mehedinti
E	Cheile Nerei-Beusnita	37.100,00	Caras-Severin
F	Muntii Apuseni	75.784,00	Alba, Bihor, Cluj
G	Rodna	46.399,00	Bistrita-Nasaud, Maramures, Suceava
H	Bucegi	32.663,00	Arges, Brasov, Dambovita, Prahova
I	Cheile Bicazului-Hasmas	6.575,00	Neamt, Harghita
J	Ceahlau	8.396,00	Neamt
K	Calimani	24.041,00	Bistrita-Nasaud, Suceava, Mures
L	Cozia	17.100,00	Valcea
M	Piatra Craiului	14.800,00	Arges, Brasov



N	Gradistea Muncelului-Cioclovina	10.000,00	Hunedoara
O	Semenic-Cheile Carasului	36.664,80	Caras-Severin
P	Muntii Macinului	11.321,00	Tulcea
R	Balta Mica a Brailei	17.529,00	Braila

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2.0. Reserves and natural monuments  
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No.	Name	Location	Surface (ha)
0	1	2	3
	Alba County		
2.1.	Detunata Goala	Comuna Bucium	24,00
2.2.	Rapa Rosie	Orasul Sebes	25,00
2.3.	Detunata Flocoasa	Comuna Bucium	5,00
2.4.	Pinteni din Coasta Jinei	Comuna Sugag, satul Dobra	1,00
2.5.	Oul Arsitei	Comuna Sasciori, satul Tonea si comuna Pianu	0,20
2.6.	Masa Jidovului	Comuna Sugag, satul Tau Bistra	0,20
2.7.	Stanca Grunzii	Comuna Sugag, satul Tau Bistra	0,20
2.8.	Piatra Despicata	Comuna Rosia Montana	0,20
2.9.	Pestera Vanatarile Ponorului	Comuna Ponor	5,00
2.10.	Pestera Ghetarul Scarisoara PN-F	Comuna Garda de Sus	(1,00)
2.11.	Pestera Ghetarul de la Vartop PN-F	Comuna Arieseni, satul Casa de Piatra	(1,00)
2.12.	Cheile Rametului	Comuna Ramet, satul Valea Manastirii	40,00
2.13.	Huda lui Papara PN-F	Comuna Salciua, satul Sub Piatra	(4,50)
2.14.	Padurea Vidolm	Comuna Ocolis, satul Vidolm	44,20
2.15.	Poiana cu narcise de la Negrileasa	Comuna Bucium	5,00
2.16.	Molhasurile Capatanei	Comuna Bistra	5,00
2.17.	Poienile cu narcise din Tecsesti	Comuna Intregalde, satul Tecsesti	2,00
2.18.	Iezerul Surianul	Orasul Cugir	20,00
2.19.	Calcarele de la Ampoita	Comuna Metes, satul Ampoita	10,00
2.20.	Cheile Intregalde	Comuna Intregalde, satul Modolesti	25,00
2.21.	Cheile Valisoarei	Comuna Livezile, satul Valisoara	20,00
2.22.	Sesul Craiului-Scarita Belioara	Comuna Posaga, satul Posaga de Sus	47,70
2.23.	Calcarele cu orbitoline de la Piatra Corbului	Comuna Metes	2,00
2.24.	Dealul cu Melci	Comuna Vidra	5,00
2.25.	Paraul Bobii	Municipiul Aiud, satul Garbova de Sus	1,50
2.26.	Calcarele de la Valea Mica	Orasul Zlatna, satul Valea Mica	1,00
2.27.	Padurea Sloboda	Municipiul Aiud	20,00
2.28.	Iezerul Ighiel	Comuna Ighiu, satul Ighiel	20,00
2.29.	Taul fara fund de la Bagau	Lopadea Noua	7,40
2.30.	Cheile Gardisoarei PN-F	Comuna Arieseni	(15,00)
2.31.	Cheile Ordancusei PN-F	Comuna Garda de Sus	(10,00)
2.32.	Cheile Albacului PN-F	Comuna Albac	(35,00)
2.33.	Cheile Vaii Morilor	Comuna Vidra, satul Ponorel	30,00
2.34.	Cheile Posegii	Comuna Posaga, satul Posaga de Sus	10,00
2.35.	Cheile Runcului	Comuna Ocolis, satul Runc	20,00
2.36.	Cheile Pociovalistei	Comuna Ocolis, satul Runc	25,00
2.37.	Cheile Glodului	Comuna Almasu Mare,	

	satul Glod	20,00
2.38. Cheile Cibului	Comuna Almasu Mare	15,00
2.39. Cheile Caprei	Orasul Zlatna, satul Fenes	15,00
2.40. Cheile Ampoitei	Comuna Metes, satul Lunca Ampoitei	15,00
2.41. Cheile Vaii Cetatii	Comuna Galda de Jos	10,00
2.42. Cheile Galditei si Turcului	Comuna Intregalde	80,00
2.43. Cascada Varciorog	Comuna Arieseni	5,00
2.44. Cascada Piscoaia	Comuna Vidra, satul Nemesi	5,00
2.45. Piatra Cetii	Comuna Intregalde	75,00
2.46. Luncile Prigoanei	Comuna Sugag	15,00
2.47. Piatra Bulbuci	Orasul Zlatna, satul Fenes	3,00
2.48. Piatra Tomii	Comuna Ceru Bacainti, satul Bulbuc	1,00
2.49. Piatra Varului	Comuna Metes	1,00
2.50. Piatra Boului	Comuna Metes	3,00
2.51. Piatra Poienii	Comuna Ighiu, satul Ighiel	1,00
2.52. Piatra Grohotisului	Comuna Ighiu, satul Ighiel	5,00
2.53. Bulzul Galzii	Comuna Galda de Jos	3,00
2.54. Cheile Galzii	Comuna Galda de Jos	1,00
2.55. Cheile Tecsestilor	Comuna Intregalde	5,00
2.56. Cheile Pravului	Comuna Ramet, satul Cheia	3,00
2.57. Cheile Piatra Baltii	Comuna Ramet, satul Cheia	2,00
2.58. Cheile Geogelului	Comuna Ponor	5,00
2.59. Cheile Plaiului	Comuna Livezile	2,00
2.60. Avenul din Hoanca Urzicarului PN-F	Comuna Rosia Montana, satul Vartop	(1,00)
2.61. Coiba Mica PN-F	Comuna Arieseni, satul Casa de Piatra	(1,00)
2.62. Coiba Mare PN-F	Comuna Arieseni, satul Casa de Piatra	(1,00)
2.63. Pestera Vartopasu	Comuna Arieseni, satul Casa de Piatra	1,00
2.64. Huda Orbului PN-F	Comuna Arieseni, satul Casa de Piatra	(1,00)
2.65. Hodobana PN-F	Comuna Arieseni, satul Hodobana	(1,00)
2.66. Avenul cu doua intrari PN-F	Comuna Arieseni, satul Hodobana	(1,00)
2.67. Izbucul Tazului PN-F	Comuna Arieseni, satul Hodobana	(1,00)
2.68. Hoanca Apei PN-F	Comuna Garda de Sus	(1,00)
2.69. Avenul de la Tau PN-F	Comuna Garda de Sus	(1,00)
2.70. Pojarul Politei PN-F	Comuna Garda de Sus	(1,00)
2.71. Avenul din sesuri PN-F	Comuna Garda de Sus	(1,00)
2.72. Izbucul Politei PN-F	Comuna Garda de Sus	(0,20)
2.73. Izbucul Cotetul Dobrestilor PN-F	Comuna Garda de Sus	(0,20)
2.74. Pestera de sub Zgurasti PN-F	Comuna Garda de Sus	(1,00)
2.75. Pestera Poarta lui Ionele PN-F	Comuna Garda de Sus	(0,10)
2.76. Pestera Dirninii PN-F	Comuna Horea, satul Matisesti	(1,00)
2.77. Izbucul Matisesti PN-F	Comuna Horea, satul Matisesti	(1,00)
2.78. Pesterile Lucia	Comuna Sohodol	1,00
2.79. Pestera de la Grosi	Comuna Salciua, satul Sub Piatra	1,00
2.80. Cheile Mandrutului	Comuna Scarisoara	3,50
2.81. Cheile Silosului	Comuna Rimetea, satul Coltesti	3,00
2.82. Cheile Manastirii	Comuna Ramet, satul Valea Manastirii	15,00
2.83. Piatra Corbului	Comuna Rosia Montana	5,00

2.84.	Pestera Valea Morii	Comuna Moneasa	5,00
2.85.	Dosul Laurului	Comuna Gurahont, satul Zimbru	32,20
2.86.	Baltele Gurahont	Comuna Gurahont	2,00
2.87.	Runcu-Grosi	Comuna Barzava	261,80
2.88.	Poiana cu narcise Rovina	Orasul Ineu	0,10
2.89.	Balta Rovina	Orasul Ineu	120,00
2.90.	Balta Soimos	Orasul Lipova	1,00
2.91.	Padurea Sic	Comuna Carand, satul Selistea	17,80
2.92.	Pestera lui Dutu	Comuna Savarsin, satul Caprioara	0,10
2.93.	Pestera Sinesie	Comuna Savarsin	0,10
2.94.	Locul fosilifer Monorostia	Comuna Barzava	0,10
2.95.	Locul fosilifer Zabalt	Comuna Dorgos satele Ususau si Zabalt	5,00
2.96.	Padurea de stejari pufosi de la Carand	Comuna Carand	2,10
2.97.	Rezervatia de soluri saraturate	Comuna Socodor	95,00
2.98.	Arboretul Macea	Comuna Macea	20,50

Arges County

2.99.	Microrelieful carstic de la Cetateni	Comuna Cetateni	10,00
2.100.	Granitul de la Albesti	Comuna Albesti de Muscel	0,50
2.101.	Locul fosilifer Suslanesti	Comuna Mioarele, satul Suslanesti	3,50
2.102.	Calcarul numulitic de la Albesti	Comuna Albesti de Muscel	1,50
2.103.	Poiana cu narcise Negrasi	Comuna Negrasi	4,10
2.104.	Zona carstica - Cheile Dambovita - Dambovicioara - Brusturet PN-M	Comunele Rucar si Dambovicioara	(2.000,00)
2.105.	Golul alpin Moldoveanu - Capra	Comunele Arefu si Nucsoara	5.000,00
2.106.	Pestera de la Piscul Negru	Comuna Arefu	0,50
2.107.	Pestera Dobrestilor	Comuna Dambovicioara	0,50
2.108.	Pestera nr. 15	Comuna Dambovicioara	0,50
2.109.	Pestera Dambovicioara PN-M	Comuna Dambovicioara	(0,50)
2.110.	Pestera Uluce PN-M	Comuna Dambovicioara	(0,50)
2.111.	Pestera Stanciului PN-M	Comuna Dambovicioara	(0,50)
2.112.	Avenul din Grind	Comuna Dambovicioara	0,50
2.113.	Lacul Iezer	Comuna Nucsoara	0,60
2.114.	Lacul Zarna	Comuna Rucar	0,50
2.115.	Lacul Jghebuoasa	Comuna Rucar	2,00
2.116.	Lacul Hartop I	Comuna Rucar	0,30
2.117.	Lacul Hartop II	Comuna Rucar	0,35
2.118.	Lacul Hartop V	Comuna Rucar	1,00
2.119.	Lacul Manastirii	Comuna Rucar	0,60
2.120.	Lacul Valea Rea	Comuna Rucar	0,50
2.121.	Lacul Buda	Comuna Nucsoara	0,40
2.122.	Lacurile Izvorul-Museteica	Comuna Nucsoara	0,30
2.123.	Lacul Scarisoara Galbena	Comuna Rucar	2,00
2.124.	Lacul Galbena IV	Comuna Rucar	0,20
2.125.	Valea Valsanului	Comunele Musatesti, Bradulet, Arefu, Nucsoara	10.000,00

Bacau County

2.126.	Dealul Perchiu	Municipiul Onesti	90,00
2.127.	Padurea Runc	Orasul Buhusi, localitatea Runcu	57,50
2.128.	Padurea Izvorul Alb	Orasul Darmanesti	3,00
2.129.	Padurea Arsura	Comuna Margineni	34,50
2.130.	Padurea de pini	Orasul Moinesti	15,00
2.131.	Tuful de la Valea Uzului	Orasul Darmanesti	0,10
2.132.	Tuful de Falcau	Orasul Slanic-Moldova	0,10
2.133.	Cineritele de Nutasca-Ruseni	Comuna Cleja	0,10
2.134.	Rezervatia de arini Dofteana	Comuna Dofteana	0,10
2.135.	Punctul fosilifer La Runc	Comuna Gura Vaii	0,10
2.136.	Punctul fosilifer Carligata	Comuna Margineni	0,10
2.137.	Strate tip pentru	Comuna Margineni	0,10

2.138.	"Formatiunea de Pietrosu" Puncte fosilifere in conglomeratele de Pietricica	Comuna Nicolae Balcescu	0,10
2.139.	Strate tip pentru "Formatiunea de Supan"	Orasul Comanesti	0,10
2.140.	Calcarele cu Lithothamnium	Orasul Slanic-Moldova, localitatea Ciresoia	0,10

Bihor County

2.141.	Groapa Ruginoasa - Valea Seaca PN-F	Orasul Nucet, satul Baita	(20,40)
2.142.	Pietrele Galbenei PN-F	Comuna Pietroasa	(6,30)
2.143.	Piatra Bulzului PN-F	Comuna Pietroasa	(1,40)
2.144.	Ghetarul Focul Viu PN-F	Comuna Pietroasa	(0,10)
2.145.	Avenul Bortigului PN-F	Comuna Pietroasa	(0,10)
2.146.	Varful Buteasa	Comuna Bulz	2,00
2.147.	Molhasurile din Valea Izbuclor PN-F	Comuna Pietroasa	(80,00)
2.148.	Faneata Izvoarelor Crisul Pietros PN-F	Comuna Pietroasa	(1,00)
2.149.	Cetatile Ponorului PN-F	Comuna Pietroasa	(14,90)
2.150.	Valea Galbenei PN-F	Comuna Pietroasa	(70,50)
2.151.	Valea Sighistelului PN-F	Comuna Campani, satul Sighistel	(412,60)
2.152.	Pietrele Boghii PN-F	Comuna Pietroasa	(38,40)
2.153.	Saritoarea Bohodeiului PN-F	Comuna Pietroasa	(32,90)
2.154.	Cetatea Radesei PN-F	Comuna Budureasa	(20,00)
2.155.	Poiana Florilor PN-F	Comuna Pietroasa	(1,00)
2.156.	Platoul Carstic Padis PN-F	Comuna Pietroasa	(39,00)
2.157.	Depresiunea Balileasa PN-F	Comuna Pietroasa	-
2.158.	Groapa de la Barsa PN-F	Comuna Pietroasa	(30,00)
2.159.	Varful Biserica Motului PN-F	Comuna Pietroasa	(3,00)
2.160.	Platoul carstic Lumea Pierduta PN-F	Comuna Pietroasa	(39,00)
2.161.	Izbucul intermitent de la Calugari	Comuna Carpinet	14,40
2.162.	Faneata Valea Rosie	Comuna Cetariu, satul Saldabagiu de Munte	4,00
2.163.	Ferice Plai si Hoanca	Comuna Buntesti	0,10
2.164.	Avenul Campeneasa cu Izbucul Boiu	Orasul Vascau	1,00
2.165.	Defileul Crisului Repede	Comuna Vadul Crisului	219,70
2.166.	Pestera Ciurului Ponor	Comuna Rosia	1,00
2.167.	Pestera Ciurului Izbuc	Comuna Rosia	0,10
2.168.	Pestera Osoiu	Comuna Varciorog, satul Fasca	0,10
2.169.	Pestera Ursilor-Chiscau	Comuna Pietroasa, satul Chiscau	1,00
2.170.	Pestera Valea Lesului	Comuna Bulz	0,10
2.171.	Pestera Vantului	Comuna Suncuius	0,10
2.172.	Pestera lui Micula	Comuna Pietroasa, satul Giulesti	0,10
2.173.	Pestera Galaseni	Comuna Magesti, satul Galaseni	0,10
2.174.	Defileul Crisului Negru la Borz	Comuna Soimi, satul Borz	12,00
2.175.	Padurea cu narcise din Osorhei	Comuna Osorhei	2,00
2.176.	Varful Carligati (Versantul Sudic) PN-F	Comuna Budureasa	(10,00)
2.177.	Paraul Petea	Comuna Sanmartin	4,00
2.178.	Dealul Pacau	Comuna Soimi	15,00
2.179.	Poiana cu narcise de la Goroniste	Comuna Tinca	1,00
2.180.	Piatra Graitoare (coasta de S-E a Braiesei)	Comuna Budureasa	5,00
2.181.	Valea Iadei cu Syringa josichaea	Comuna Bulz, satul Remeti	2,00
2.182.	Pasunea cu Corynephorus de la Voievozi	Comuna Simian	5,00
2.183.	Complexul hidrografic Valea Rece	Comuna Salacea	2,00
2.184.	Lacul Cicos	Comuna Sacuieni	10,00
2.185.	Gruiul Pietrii	Comuna Lugasu de Jos	0,40
2.186.	Calcarele tortoniene de la Miheleu	Comuna Lazareni	0,10

2.187.	Locul fosilifer de pe Dealul Simleului	Comuna Sanmartin, satul Betfia	5,00
2.188.	Calcarele tortoniene de la Tasad	Comuna Dragesti	0,40
2.189.	Locul fosilifer din Valea Lionii-Pestis	Orasul Alesd, satul Pestis	0,01
2.190.	Lentila 204 Brusturi - Cornet	Comuna Astileu	0,10
2.191.	Calcarele cu hippuriti din Valea Crisului	Comuna Bratca	0,40
2.192.	Locul fosilifer de la Cornitel	Comuna Borod	0,01
2.193.	Pestera Meziad	Comuna Remetea	0,10
2.194.	Colonia de Pasari de la Padurea Radvani	Comuna Cefa	3,00
2.195.	Izvoarele mezotermale Rabagani	Comuna Rabagani	0,50
2.196.	Pestera Vacii	Comuna Rosia	0,10
2.197.	Pestera Grust	Comuna Rosia	0,10
2.198.	Pestera Igrita	Comuna Astileu	0,10
2.199.	Pestera Farcz	Comuna Rosia	0,10
2.200.	Pestera Toplita	Comuna Dobresti	0,10

#### Bistrita-Nasaud County

2.201.	Piatra Corbului	Comuna Cetate, satul Budacu de Sus	5,00
2.202.	Masivul de sare de la Saratel	Comuna Sieu-Magherus, satul Saratel	5,00
2.203.	Vulcanii Noroiosi La Gloduri	Comuna Monor	2,00
2.204.	Rapa cu papusi	Comuna Mariselu, satul Domnesti	2,00
2.205.	Zavoaietele Borcutului	Comuna Romuli	1,00
2.206.	Pestera Tausoare	Comuna Rebrisoara	71,00
2.207.	Poiana cu narcise de pe Sesul Mogosenilor	Comuna Nimigea	6,00
2.208.	La Saratura	Comuna Sintereag, satul Blajenii de Jos	5,00
2.209.	Poiana cu narcise pe de masivul Saca	Comuna Rodna, satul Valea Vinului	5,00
2.210.	Poiana cu narcise pe de Sesul Vaii Budacului	Comuna Cetate, satul Orheiu Bistritei	6,00
2.211.	Piatra Fantanele	Comuna Prundul Bargaului	5,00
2.212.	Piatra Cusmei	Comuna Livezile, satul Cusma	5,00
2.213.	Padurea Posmus	Comuna Sieu-Magherus	2,00
2.214.	Valea Repedea	Comuna Bistrita Bargaului	222,00
2.215.	Taul Zanelor	Comuna Bistrita Bargaului	15,00
2.216.	Lacul Zagra	Comuna Zagra	1,00
2.217.	Locul fosilifer Rapa Mare	Comuna Cetate, satul Budacu de Sus	1,00
2.218.	Cheile Bistritei Ardelene	Comuna Bistrita Bargaului	50,00
2.219.	Pestera din Valea Cobaselului	Comuna Sant	1,00
2.220.	Rapa Verde	Comuna Cetate, satul Budacu de Sus	1,00
2.221.	Comarnic	Comuna Livezile	5,00
2.222.	Crovul de la Larion	Comuna Lunca Ilvei	250,00
2.223.	Izvoarele Mihaiesei	Comuna Maieru, satul Anies	50,00
2.224.	Stancile Tatarului	Comuna Bistrita Bargaului	25,00
2.225.	Ineu Lala PN-G	Comunele Sant, Lesu, Rodna	(2.568,00)

#### Botosani County

2.226.	Stanca Stefanesti	Comuna Stefanesti	1,00
2.227.	Turbaria de la Dersca	Comuna Dersca	10,00
2.228.	Bucecea - Baltile Siretului	Comuna Bucecea	2,00
2.229.	Stanca Ripiceni	Comuna Ripiceni	1,00
2.230.	Padurea Ciornohal	Comuna Calarasi	76,50
2.231.	Padurea Tudora	Comuna Tudora	117,60
2.232.	Arinisul de la Horlaceni	Comuna Sendriceni	5,00
2.233.	Fagetul secular Stuhuasa	Comuna Suharau	60,70

Brasov County

2.234.	Bucegi (Abruptul Bucsoiu, Malaesti, Gaura) PN-H	Orasul Rasnov, comunele Bran, Moieciu	(1.634,00)
2.235.	Locul fosilifer de la Vama Strunga PN-H	Comuna Moieciu	(10,00)
2.236.	Piatra Craiului PN-M	Orasul Zarnesti	(1.459,00)
2.237.	Cheile Zarnesilor PN-M	Comuna Moieciu	(109,80)
2.238.	Stanca bazaltica de la Rupea	Orasul Rupea	9,00
2.239.	Coloanele de bazalt de la Racos	Comuna Racos	1,10
2.240.	Coloanele de bazalt de la Piatra Cioplita	Comuna Comana, satul Comana de Jos	1,00
2.241.	Vulcanii Noroiosi de la Baile Homorod	Comuna Homorod	0,10
2.242.	Microcanionul in bazalt de la Hoghiz	Comuna Hoghiz	2,00
2.243.	Cheile Dopca	Comuna Hoghiz	4,00
2.244.	Locul fosilifer Ormenis	Comuna Ormenis	4,00
2.245.	Locul fosilifer Carhaga	Comuna Racos	1,60
2.246.	Locul fosilifer Purcareni	Comuna Tarlungeni	0,20
2.247.	Pestera Barlogul Ursului	Comuna Apata	1,00
2.248.	Pestera Valea Cetatii	Orasul Rasnov	1,00
2.249.	Pestera Liliiecilor	Comuna Moieciu	1,00
2.250.	Poienile cu narcise din Dumbrava Vadului	Comuna Sercaia, satul Vad	394,90
2.251.	Dealul Cetatii - Lempes	Comuna Harman	274,50
2.252.	Mlastina Harman	Comuna Harman	2,00
2.253.	Postavarul (Muntele)	Municipiul Brasov	1.025,50
2.254.	Cotul Turzunului	Comuna Hoghiz	0,20
2.255.	Tampa (Muntele)	Municipiul Brasov	188,20
2.256.	Stejerisul Mare	Municipiul Brasov	16,30
2.257.	Padurea Bogatii	Comunele Maierus si Hoghiz	8,50
2.258.	Padurea si mlastinile eutrofe de la Prejmer	Comuna Prejmer	252,00

Braila County

2.259.	Padurea Camenita	Comuna Sutesti	1,30
2.260.	Lacul Jirlau - Visani	Comunele Jirlau, Visani, Galbenu	930,00

Buzau County

2.261.	Vulcanii Noroiosi Paclele Mari	Comuna Scortoasa	15,20
2.262.	Vulcanii Noroiosi Paclele Mici	Comuna Berca	10,20
2.263.	Sarea lui Buzau	Comuna Viperesti	0,80
2.264.	Blocurile de calcar de la Badila	Comuna Viperesti	1,00
2.265.	Padurea Crivineni	Comuna Patarlagele	14,10
2.266.	Padurea Bradeanu	Comuna Bradeanu	5,80
2.267.	Platoul Meledic	Comuna Manzalesti	67,50
2.268.	Padurea "Lacurile Bisoca"	Comuna Bisoca	10,00
2.269.	Dealul cu Lilieci Cernatesti	Comuna Cernatesti	3,00
2.270.	Padurea cu tisa	Comuna Chiojdu	150,00
2.271.	Balta Alba	Comuna Balta Alba	600,00
2.272.	Balta Amara	Comuna Balta Alba	900,00
2.273.	Focul Viu - Lopatari	Comuna Lopatari	0,03
2.274.	Piatra Alba "La Grunj"	Comuna Manzalesti	0,025
2.275.	Chihlimbarul de Buzau	Comuna Colti	2,52

Caras-Severin County

2.276.	Rezervatia Cheile Nerei - Beusnita PN-E	Comunele Sasca Montana si Sopotul Nou	(3.081,30)
2.277.	Valea Ciclovei - Ilidia PN-E	Comuna Ciclova Romana	(1.865,60)
2.278.	Cheile Susarei PN-E	Comuna Sasca Montana	(246,00)
2.279.	Izvorul Bigar PN-E	Comuna Bozovici	(176,60)
2.280.	Lisovacea PN-E	Comunele Bozovici si Lapusnicu Mare	(33,00)

2.281. Ducin PN-E	Comuna Lapusnicu Mare	(260,70)
2.282. Cheile Carasului PN-O	Comuna Carasova	(3.028,30)
2.283. Izvoarele Carasului PN-O	Orasul Anina	(578,00)
2.284. Izvoarele Nerei PN-O	Comuna Prigor	(5.028,00)
2.285. Cheile Garlistei PN-O	Orasul Anina, comuna Goruia	(517,00)
2.286. Barzavita PN-O	Comuna Valiug	(3.406,90)
2.287. Buhui-Marghitas PN-O	Orasul Anina	(979,00)
2.288. Pestera Comarnic PN-O	Comuna Carasova	(0,10)
2.289. Pestera Popovat PN-O	Comuna Carasova	(0,10)
2.290. Pestera Buhui PN-O	Orasul Anina	(0,10)
2.291. Groposu PN-O Municipiul	Resita	(883,60)
2.292. Rezervatia Domogled PN-B	Orasul Baile Herculane	(2.382,80)
2.293. Coronini - Bedina PN-B	Orasul Baile Herculane, comuna Mehadia	(3.864,80)
2.294. Iauna - Craiova PN-B	Comunele Cornereva si Mehadia	(1.545,10)
2.295. Iardasita PN-B	Comuna Mehadia	(501,60)
2.296. Belareca PN-B	Comunele Cornereva si Mehadia	(1.665,70)
2.297. Pestera Barzoni PN-B	Comuna Cornereva	(0,10)
2.298. Valea Mare PN-D	Orasul Moldova Noua	(1.179,00)
2.299. Balta Nera - Dunare PN-D	Comuna Socol	(10,00)
2.300. Faneata cu narcise Zervesti	Comuna Turnu Ruieni	40,00
2.301. Locul fosilifer Soceni	Comuna Ezeris	0,40
2.302. Cheile Globului	Comuna Iablanita	225,00
2.303. Cheile Rudariei	Comuna Eftimie Murgu	250,00
2.304. "Cuptor" - Bradisoru de Jos	Orasul Oravita	0,50
2.305. "Sfinxul Banatean"	Comuna Toplet	0,50
2.306. "Rapa Neagra"	Comuna Mehadia	5,00
2.307. Rapa cu lastuni din Valea Divici	Comuna Pojejena	5,00
2.308. Dealul Petrolea - Cuptoare	Comuna Cornea	5,00
2.309. Valea Greatca	Comuna Mehadia	9,00
2.310. Ravena Crouri	Comuna Iablanita	7,00
2.311. Ogasul Slatinic	Comuna Bozovici	1,00
2.312. Bazias	Comuna Socol	170,90
2.313. Padurea Ezerisel	Comuna Ezeris	120,00
2.314. Locul fosilifer de la Apadia	Comuna Brebu	1,00
2.315. Locul fosilifer de la Delinesti	Comuna Paltinis	4,00
2.316. Locul fosilifer de la Ezeris	Comuna Ezeris	2,00
2.317. Locul fosilifer de la Globu Craiovei	Comuna Iablanita	2,00
2.318. Locul fosilifer de la Petrosnita	Comuna Bucosnita	3,00
2.319. Locul fosilifer de la Tarnova	Comuna Tarnova	2,00
2.320. Locul fosilifer de la Tirol	Comuna Doclin	0,50
2.321. Locul fosilifer de la Valea Pai	Comuna Ramna	2,00
2.322. Locul fosilifer de la Zorlentu Mare	Comuna Zorlentu Mare	3,00

Calarasi County

2.323. Padurea Ciornuleasa	Comuna Mitreni	75,20
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Cluj County

2.324. Cariera Corabia	Comuna Gilau, satul Somesul Rece	2,00
2.325. Pestera Varfurasu	Comuna Margau	1,00
2.326. Fanatele Suatu (I si II)	Comuna Suatu	9,20
2.327. Fanatele Clujului-Coparsaie	Municipiul Cluj-Napoca	1,50
2.328. Fanatele Clujului-Valea lui Craiu	Municipiul Cluj-Napoca	1,00
2.329. Valea Morilor	Comuna Feleacu	1,00
2.330. Paraul Dumbrava	Comuna Ciurila	0,50
2.331. Cheile Turzii	Comuna Mihai Viteazu	104,00
2.332. Lacul Stiucilor	Comuna Fizesu Gherlii	26,00
2.333. Valea Legiilor	Comuna Geaca	13,50
2.334. Stufarisurile de la Sic	Comuna Sic	2,00
2.335. Fagetul Clujului	Municipiul Cluj-Napoca	10,00
2.336. Pestera Mare (de pe Valea Firei) PN-F	Comuna Margau	(2,00)
2.337. Pestera din Piatra Ponorului PN-F	Comuna Margau	(2,00)
2.338. Gipsurile de la Leghia	Comuna Aghiresu	1,00
2.339. Locul fosilifer Corus	Comuna Baciu	2,00

2.340.	Molhasul Mare de la Izbuc	Comuna Belis	8,00
2.341.	Cheile Baciului	Comuna Baci	3,00
2.342.	Cheile Turenilor	Comuna Tureni	25,00
2.343.	Saraturile si Ocna Veche	Municipiul Turda	10,00
2.344.	Parcul Muntii Apuseni PN-F	Comuna Belis	(6.200,00)

#### Constanta County

2.345.	Vama Veche - 2 Mai (Acvatoriul litoral marin)	Comuna Limanu, satul Vama Veche	5.000,00
2.346.	Grindul Chituc DD-A	Comuna Corbu	(2.300,00)
2.347.	Grindul Lupilor DD-A	Comuna Mihai Viteazu	(2.075,00)
2.348.	Corbu-Nuntasi - Histria DD-A	Comunele Istria si Corbu	(1.610,00)
2.349.	Cetatea Histria DD-A	Comuna Istria	(350,00)
2.350.	Peretii calcarosi de la Petrosani	Comuna Deleni	4,80
2.351.	Locul fosilifer Aliman	Comuna Aliman	15,00
2.352.	Reciful neojurasic de la Topalu	Comuna Topalu	8,00
2.353.	Locul fosilifer Credinta	Comuna Cobadin	6,00
2.354.	Locul fosilifer Cernavoda	Orasul Cernavoda	3,00
2.355.	Locul fosilifer Seimenii Mari	Comuna Seimeni	0,50
2.356.	Pestera La Adam	Comuna Targusor	5,00
2.357.	Pestera Gura Dobrogei	Comuna Targusor	5,00
2.358.	Pestera Limanu	Comuna Limanu	1,00
2.359.	Valu lui Traian	Comuna Valu lui Traian	5,00
2.360.	Padurea Hagieni	Comuna Albesti	392,90
2.361.	Padurea Dumbraveni	Comuna Dumbraveni	345,70
2.362.	Recifii jurasici Cheia	Comuna Targusor	170,00
2.363.	Padurea Canaraua Fetii	Comuna Baneasa	168,30
2.364.	Fantanita - Murfatlar	Orasul Basarabi	66,40
2.365.	Padurea Esehioi	Comuna Ostrov	26,00
2.366.	Dunele marine de la Agigea	Municipiul Constanta	25,00
2.367.	Dealul Alah Bair	Comuna Crucea	10,00
2.368.	Lacul Agigea	Municipiul Constanta, comuna Agigea	86,80
2.369.	Canaralele din Portul Harsova	Orasul Harsova	5,30
2.370.	Locul fosilifer Movila Banului	Municipiul Mangalia	4,00
2.371.	Obanul Mare si Pestera Movile	Municipiul Mangalia	12,00

#### Covasna County

2.372.	Mestecanisul de la Reci	Comuna Reci	48,20
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#### Dambovita County

2.373.	Pestera Cocora (inclusiv Cheile Ursilor)	Comuna Moroeni	(307,00)
2.374.	Cheile Tatarului	Comuna Moroeni	(144,30)
2.375.	Valea Horoabei	Comuna Moroeni	(5,70)
2.376.	Orzea - Zanoaga	Comuna Moroeni	(841,20)
2.377.	Zanoaga - Lucacila	Comuna Moroeni	259,40
2.378.	Rezervatia Plaiul Domnesc	Comuna Moroeni	0,50
2.379.	Pestera Rateiului	Comuna Moroeni	1,50
2.380.	Turbaria Laptici	Comuna Moroeni	14,90
2.381.	Poiana Crucii	Comuna Moroeni	0,50
2.382.	Rezervatia Plaiul Hotilor	Comuna Moroeni	0,50
2.383.	Izvorul de la Corbii Ciungi	Comuna Corbii Mari	5,00

#### Dolj County

2.384.	Poiana Bujorului din padurea Plenita	Comuna Plenita	50,00
2.385.	Valea Rea - Radovan	Orasul Segarcea si comuna Radovan	20,00
2.386.	Dunele Dabuleni ("La Cetate")	Comuna Dabuleni	8,00
2.387.	Pajistea halofila Gighera	Comuna Gighera	4,00
2.388.	Pajistea Cetate (din Lunca Dunarii)	Comuna Cetate	6,00
2.389.	Pajistea Gogosu-Stefanel	Comuna Gogosu	10,00
2.390.	Locul fosilifer Bucovat	Comuna Bucovat	4,00
2.391.	Locul fosilifer Dranic	Comuna Dranic	6,00
2.392.	Ciuperceni-Desa	Comuna Ciupercenii Noi	200,00



2.393.	Lacul Adunatii de Geormana	Comuna Bratovoesti	102,00
2.394.	Complexul lacustru Preajba-Facai	Municipiul Craiova, localitatea Facai si comuna Malu Mare, satul Preajba	28,00
2.395.	Balta Cilieni-Bailesti	Orasul Bailesti	47,00
2.396.	Lacul Ionele	Comuna Desa	3,20
2.397.	Balta Neagra	Comuna Desa	1,20
2.398.	Balta Lata	Comuna Ciupercenii Noi	28,00
2.399.	Raurile Desnatui si Terpezita amonte de Fantanele	Comuna Teslui, satul Fantanele	80,00 km
2.400.	Raul Balasan amonte de Bailesti	Comuna Teslui, satul Fantanele	36,00 km
2.401.	Lacul Caraula	Comuna Caraula	28,00

#### Galati County

2.402.	Dunele de nisip de la Hanu Conachi	Comuna Fundeni, satul Hanu Conachi	199,30
2.403.	Padurea Garboavele	Municipiul Galati	230,00
2.404.	Padurea Breana-Roscani	Comuna Baneasa	78,30
2.405.	Locul fosilifer Tirighina-Barbosi	Municipiul Galati	1,00
2.406.	Locul fosilifer Rates	Municipiul Tecuci	1,50
2.407.	Padurea Fundeanu	Comuna Draguseni	53,20
2.408.	Padurea Talasmani	Orasul Beresti	20,00
2.409.	Padurea Buciumeni	Comunele Buciumeni si Brahamesti	71,20
2.410.	Ostrovul Prut	Municipiul Galati	62,00
2.411.	Balta Potcoava	Comuna Branistea	49,00
2.412.	Balta Talabasca	Comuna Tudor Vladimirescu	139,00
2.413.	Locul fosilifer Beresti	Orasul Beresti	49,00
2.414.	Lunca joasa a Prutului	Comuna Cavadinesti	81,00
2.415.	Lacul Pochina	Comuna Suceveni	74,80
2.416.	Lacul Vlascuta	Comuna Mastacani	41,80
2.417.	Padurea Pogonesti	Comuna Baneasa	33,50

#### Giurgiu County

2.418.	Padurea Oloaga-Gradinari	Comuna Comana	248,00
2.419.	Padurea Padina Tatarului	Comuna Comana	230,00
2.420.	Padurea Manafu	Orasul Ghimpati	28,00
2.421.	Rezervatia Tesila	Comuna Schitu, satul Vlasin	52,50

#### Gorj County

2.422.	Piatra Closanilor (inclusiv pesterile Closani si Cioaca cu Brebenei) PN-B	Comuna Pades, satul Closani	(1.730,00)
2.423.	Ciucevele Cernei PN-B	Comuna Pades, satul Cerna-Sat	(1.166,00)
2.424.	Pestera Muierii	Comuna Baia de Fier	19,00
2.425.	Pestera Martel PN-B	Comuna Pades	(2,00)
2.426.	Cheile Corcoaiei PN-B	Comuna Pades, satul Cerna-Sat	(34,00)
2.427.	Sfinxul Lainicilor	Orasul Bumbesti-Jiu	1,00
2.428.	Piatra Buha	Comuna Sacelu	1,00
2.429.	Piatra Andreaua	Comuna Tismana, satul Sohodol	1,00
2.430.	Piatra Biserica Dracilor	Comuna Sacelu, satul Blahnita de Sus	1,00
2.431.	Izvoarele Izvernei	Comuna Tismana	500,00
2.432.	Izbucul Jalesului	Comuna Runcu	20,00
2.433.	Pestera Gura Plaiului	Comuna Tismana	10,00
2.434.	Pestera Lazului	Comuna Pades	2,00
2.435.	Pestera Iedului	Comuna Baia de Fier	1,00
2.436.	Cotul cu Aluni	Comuna Tismana	25,00
2.437.	Rezervatia botanica Cioclovina	Comuna Tismana	12,00
2.438.	Padurea Tismana-Pocruia	Comuna Tismana	51,60
2.439.	Padurea Gorganu	Comuna Pades,	

	satul Motru Sec	21,30
2.440. Padurea Polovragi	Comuna Polovragi	10,00
2.441. Formatiunile eocene de la Sacelu	Comuna Sacelu	1,00
2.442. Cheile Sohodolului	Comuna Runcu	350,00
2.443. Muntele Oslea	Comunele Pades si Tismana	280,00
2.444. Cheile Oltetului si Pestera Polovragi	Comuna Polovragi	150,00
2.445. Cornetul Pocruiei	Comuna Tismana	70,00
2.446. Piatra Borostenilor	Comuna Pestisani	28,00
2.447. Locul fosilifer Grosera	Comuna Aninoasa	1,00
2.448. Locul fosilifer Garbovu	Comuna Turceni	1,00
2.449. Locul fosilifer Buzesti	Comuna Crasna	1,00
2.450. Locul fosilifer Saulesti	Comuna Saulesti	1,00
2.451. Locul fosilifer Valea Desului	Comuna Vladimir	1,00
2.452. Valea Sodomului	Comuna Sacelu	1,00
2.453. Valea Ibanului	Comuna Scoarta, satul Bobu	1,00
2.454. Padurea Barcului	Orasul Novaci	25,00
2.455. Stancile Rafaila	Orasul Bumbesti-Jiu	1,00
2.456. Izvoarele minerale Sacelu	Comuna Sacelu	1,00
2.457. Dealul Gornacelu	Comuna Schela, satul Gornacel	1,00

#### Harghita County

2.458. Muntele de sare Praid	Comuna Praid	60,00
2.459. Rezervatia geologica de la Sancraieni	Comuna Sancraieni	10,00
2.460. Lacul Rat	Comuna Mugeni	10,00
2.461. Dealul Melcului (Firtus)	Comuna Corund	8,00
2.462. Vulcanii Noroiosi de la Filias	Orasul Cristuru Secuiesc	1,00
2.463. Pestera Sugau	Comuna Suseni	17,00
2.464. Avenul Licas PN-I	Orasul Gheorgheni, localitatea Lacul Rosu	(5,00)
2.465. Tinovul Luci	Comuna Sancraieni	273,00
2.466. Mlastina Dupa Lunca	Comuna Voslabeni	40,00
2.467. Tinovul de la Plaiesii de Jos	Comuna Plaiesii de Jos	15,00
2.468. Poiana narciselor de la Vlahita	Orasul Vlahita	20,00
2.469. Piemontul Nyeres	Comuna Joseni	20,00
2.470. Pietrele Rosii	Comuna Tulghes	10,00
2.471. Mlastina cea Mare	Comuna Remetea	4,00
2.472. Mlastina Valea de Mijloc	Comuna Tusnad, satul Tusnadu Nou	4,00
2.473. Mlastina Benes	Comuna Tusnad, satul Vrabia	4,00
2.474. Paraul Dobreanului	Comuna Bilbor	4,00
2.475. Mlastina Buýdos - Santimbru	Comuna Sancraieni	3,00
2.476. Mlastina Nadas	Comuna Tusnad, satul Tusnadul Nou	4,00
2.477. Mlastina Dumbrava Harghitei	Comuna Lueta	2,00
2.478. Mlastina Borsaros-Sancraieni	Comuna Sancraieni	1,00
2.479. Scaunul Rotund	Orasul Borsec	40,00
2.480. Rezervatia Lacul Iezer din Calimani PN - K	Orasul Toplita	(322,00)
2.481. Rezervatia botanica Borsec	Orasul Borsec	2,00
2.482. Cheile Bicazului si Lacul Rosu PN-I	Orasul Gheorgheni	(2.128,00)
2.483. Masivul Hasmasul Mare, Piatra Singuratica- Hasmasul Negru PN-I	Comuna Sandominic	(800,00)
2.484. Piatra Soimilor	Orasul Baile Tusnad	1,00
2.485. Cheile Varghisului si pesterile din chei	Comuna Meresti	800,00
2.486. Lacul Sfanta Ana	Comuna Sanmartin, satul Lazaresti	240,00
2.487. Tinovul Mohos	Comuna Sanmartin, satul Lazaresti	240,00
2.488. Dealul Firtus	Comuna Corund	40,00
2.489. Popasul pasarilor de la Sanpaul	Comuna Martinis	10,00
2.490. Mlastina Nyirkert	Comuna Tusnad	4,00
2.491. Cascada de apa termala	Orasul Toplita	0,50
2.492. Mlastina Csemo-Vrabia	Comuna Tusnad	5,00

2.493. Lacul Dracului	Comuna Carta	20,00
Hunedoara County		
2.494. Rezervatia stiintifica Gemenele PN-C	Comuna Rau de Mori	(1.629,40)
2.495. Pestera cu Corali PN-C	Orasul Uricani, satul Campu lui Neag	(0,50)
2.496. Pestera Zeicului PN-C	Orasul Uricani, satul Campu lui Neag	(1,00)
2.497. Complexul carstic Ponorici - Cioclovina PN-N	Comuna Bosorod	(1,50)
2.498. Piatra Crinului	Municipiul Petrosani	0,50
2.499. Pestera Sura Mare	Comuna Pui	5,00
2.500. Pestera Tecuri	Comuna Baru, satul Baru Mare	2,00
2.501. Locul fosilifer Lapugiu de Sus	Comuna Lapugiu de Jos	5,00
2.502. Locul fosilifer cu dinozauri de la Sanpetru	Comuna Santamaria-Orlea, satul Sanpetru	5,00
2.503. Pestera Cizmei	Comuna Bulzestii de Sus	1,00
2.504. Dealul Colt si Dealul Zanoaga	Municipiul Deva	78,40
2.505. Fanatele Pui	Comuna Pui	13,00
2.506. Fanatele cu narcise Nucsoara	Comuna Salasu de Sus	20,00
2.507. Mlastina Pesteana	Comuna Densus, satul Pesteana	2,00
2.508. Calcarele de la Fata Fetii	Comuna Rau de Mori	3,00
2.509. Varful Poieni	Comuna Salasu de Sus, satul Ohaba de sub Piatra	0,80
2.510. Magurile Sacarambului	Comuna Certeju de Sus, satul Sacaramb	13,00
2.511. Padurea Chizid	Municipiul Hunedoara	50,00
2.512. Padurea Bejan	Municipiul Deva	70,00
2.513. Locul fosilifer Ohaba - Ponor	Comuna Pui, satele Ohaba si Ponor	10,00
2.514. Muntele Vulcan	Comuna Buces	5,00
2.515. Podul natural de la Grohot	Comuna Bulzestii de Sus, satul Grohot	1,00
2.516. Padurea Slivut	Orasul Hateg	40,00
2.517. Calcarele din Dealul Magura	Comuna Baita, satul Craciunesti	120,00
2.518. Dealul Cetatii Deva	Municipiul Deva	30,00
2.519. Magura Uroiului	Orasul Simeria	10,00
2.520. Tufurile calcaroase din Valea Bobalna	Comuna Rapoltu Mare	12,50
2.521. Cheile Madei	Comuna Balsa, satul Mada	10,00
2.522. Cheile Crivadiei	Comuna Banita, satul Crivadia	10,00
2.523. Dealul si Pestera Bolii	Comuna Banita	10,00
2.524. Arboretumul Simeria	Orasul Simeria	70,00
2.525. Codrii seculari pe Valea Dobrisoarei si Prisloapei	Comuna Batrana	139,30
2.526. Padurea Pojoga	Comuna Zam, satul Pojoga	20,00
2.527. Calcarele de la Godinesti	Comuna Zam, satul Godinesti	6,00
2.528. Cheile Jietului	Orasul Petrila	10,00
2.529. Cheile Ribicioarei si Uibarestilor	Comuna Ribita	20,00
2.530. Cheile Cernei	Comuna Lunca Cernii de Jos	2,00
2.531. Cheile Taia	Orasul Petrila	2,00
2.532. Apele mezotermale Geoagiu-Bai	Comuna Geoagiu	8,00
2.533. Rezervatia Boholt	Comuna Soimus, satul Boholt	1,00
2.534. Calcarele de la Boiul de Sus	Comuna Gurasada	50,00
2.535. Paleofauna reptiliana Tustea	Comuna Unirea, satul Tustea	0,50

Iasi County

2.536. Fanetele seculare Valea lui David	Comuna Letcani	46,36
2.537. Fagetul Secular Humosu	Comuna Siretel	73,30
2.538. Padurea Uricani	Comuna Miroslava, satul Uricani	68,00

2.539. Padurea Roscani	Comuna Trifesti	34,60
2.540. Padurea Catalina-Cotnari	Comuna Cotnari	7,60
2.541. Locul fosilifer Dealul Repedea	Comuna Barnova	5,80
2.542. Bohotin - Pietrosu	Comuna Raducaneni, satul Bohotin	0,91
2.543. Poiana cu Schit	Comuna Grajduri	9,50
2.544. Poieni - Carbutariei	Comuna Schitu Duca	9,20
2.545. Padurea Frumusica	Comuna Madarjac	97,30
2.546. Padurea Tatarusi	Comuna Tatarusi	49,90
2.547. Pietrosu	Comuna Dobrovat	83,00
2.548. Padurea Icuseni	Comuna Victoria	11,60
2.549. Lunca Mircesti (Vasile Alecsandri)	Comuna Mircesti	26,30
2.550. Punctul fosilifer Baiceni	Comuna Cucuteni, satul Baiceni	3,23
2.551. Saraturile din Valea Ilenei	Comuna Dumesti	5,90
2.552. Prutetul Balalau	Comuna Probota	24,89
2.553. Balta Teiva Visina	Comuna Popricani	6,90
2.554. Cotul Bran pe Raul Prut	Comuna Golaiesti, satul Bran	10,00
2.555. Cotul Salageni	Comuna Grozesti	5,81
2.556. Raul Prut	Comunele Bivolari, Trifesti, Godinesti, Probota, Tutora, Prisacani, Gorban	4.316,00
2.557. Acumularea Chirita	Comuna Holboca	78,00
2.558. Acumularea Parcovaci	Orasul Harlau	50,00
2.559. Padurea Dancu-Iasi	Comuna Holboca	10,80

#### Ilfov County

2.560. Lacul Snagov	Comuna Snagov	100,00
2.561. Padurea Snagov	Comuna Snagov	10,00

#### Maramures County

2.562. Izvorul Batrana PN-G	Comuna Moisei	(0,50)
2.563. Pietrosul Mare PN-G	Orasul Borsa	(3.300,00)
2.564. Lacul Albastru	Orasul Baia Sprie	0,50
2.565. Rezervatia fosilifera Chiuzbaia	Orasul Baia Sprie, localitatea Chiuzbaia	50,00
2.566. Pestera Valenii Somcutei	Comuna Somcuta Mare	5,00
2.567. Pestera cu Oase	Comuna Baiut	0,50
2.568. Lacul Morarenilor	Comuna Ocna Sugatag, satul Breb	20,00
2.569. Stancariile Salhoi-Zambroslavele	Orasul Borsa	5,00
2.570. Mlastina Poiana Brazilor	Comuna Sapanta	3,00
2.571. Mlastinile Vlaschinescu	Municipiul Baia Mare	3,00
2.572. Taul lui Dumitru	Municipiul Baia Mare, satul Firiza	3,00
2.573. Padurea Ronisoara	Comuna Rona de Sus	62,00
2.574. Padurea Craiasa	Comuna Ocna Sugatag	44,00
2.575. Padurea Bavna	Comuna Satulung, satul Fersig si comuna Miresu Mare	26,00
2.576. Padurea de larice Costui	Comuna Rona de Sus	0,70
2.577. Creasta Cocosului	Comuna Desesti, satul Mara	50,00
2.578. Cheile Tatarului	Comuna Desesti, satul Mara	15,00
2.579. Cheile Babei	Comuna Coroieni, satul Beba	15,00
2.580. Cornu Nedeei - Ciungii Balasinii	Orasul Borsa	800,00
2.581. Arboretul de castan comestibil de la Baia Mare	Municipiul Baia Mare	500,00
2.582. Pestera si izbulul Izvorul Albastru al Izei	Comuna Sacel	100,00
2.583. Cheile Lapusului (intre Groapele si Impreunaturi)	Orasul Targu Lapus	25,00 km
2.584. Padurea cu pini Comja	Orasul Seini	0,50
2.585. Arcer - Tibles Bran	Comuna Suciu de Sus, satul Grosii Tiblesului	150,00

2.586.	Varful Farcau - lacul Vinderelu - Varful Mihailescu	Comuna Repedea	100,00
2.587.	Pestera Boiu Mare	Comuna Boiu Mare	0,50
2.588.	Poiana cu narcise Tomnatec - Sehleanu	Comuna Repedea	100,00
2.589.	Piatra Rea	Orasul Borsa	50,00
2.590.	Mlastina Iezerul Mare	Comuna Desesti	5,00
2.591.	Coloanele de la Limpedea	Municipiul Baia Mare	3,00
2.592.	Rozeta de piatra Ilba	Comuna Cicarlau, satul Ilba	0,50
2.593.	Dealul Solovan	Municipiul Sighetu Marmatiei	1,02
2.594.	Mlastina Taul Negru	Comuna Baiut, satul Strambu-Baiut	1,00

Mehedinti County

2.595.	Pestera Epuran	Comuna Ciresu, satul Jupanesti	1,00
2.596.	Izvorul si stancariile de la Camana	Comuna Podeni	25,00
2.597.	Gura Vaii-Varciorova PN-D	Municipiul Drobeta-Turnu Severin, localitatea Gura Vaii	(305,00)
2.598.	Valea Oglanicului	Comuna Breznita-Ocol	150,00
2.599.	Lunca Vanjului	Orasul Vanju Mare	14,00
2.600.	Padurea de liliac Ponoarele	Comuna Ponoarele	20,00
2.601.	Tufarisurile mediteraneene de la Isverna	Comuna Isverna	10,00
2.602.	Varful lui Stan PN-B	Comuna Isverna	(120,00)
2.603.	Valea Tesna PN-B	Comuna Balta	(160,00)
2.604.	Padurea Borovat	Comuna Balvanesti	30,00
2.605.	Padurea Bunget	Comuna Burila Mare	18,20
2.606.	Padurea Draghiceanu	Comuna Obarsia-Closani	60,00
2.607.	Dealul Duhovnei	Comuna Ilovita	50,00
2.608.	Dealul Varanic	Comuna Breznita-Ocol	350,00
2.609.	Cazanele Mari si Cazanele Mici PN-D	Comuna Dubova	(215,00)
2.610.	Locul fosilifer Svinita PN-D	Comuna Svinita	(95,00)
2.611.	Locul fosilifer Bahna PN-D	Comuna Ilovita	(10,00)
2.612.	Padurea Starmina	Comuna Hinova	100,30
2.613.	Complexul carstic de la Ponoarele	Comuna Ponoarele	100,00
2.614.	Peretii calcarosi de la Izvoarele Cosustei	Comuna Balta	60,00
2.615.	Cheile Cosustei	Comuna Balta	50,00
2.616.	Cornetul Babelor si Cerboanei	Comuna Balta	40,00
2.617.	Cornetul Piatra Incalecata	Comuna Isverna	12,00
2.618.	Cheile Topolnitei si Pestera Topolnitei	Comuna Ciresu	60,00
2.619.	Cornetul Baltii	Comuna Balta	30,00
2.620.	Cornetul Vaii si Valea Manastirii	Orasul Baia de Arama	40,00
2.621.	Locul fosilifer Malovat	Comuna Malovat	6,00
2.622.	Cracul Gaioara PN-D	Municipiul Drobeta-Turnu Severin, localitatea Gura Vaii	(5,00)
2.623.	Tufarisurile mediteraneene Cornetul Obarsia-Closani	Comuna Obarsia-Closani	60,00
2.624.	Cracul Crucii PN-D	Municipiul Drobeta-Turnu Severin, localitatea Gura Vaii	(2,00)
2.625.	Fata Virului PN-D	Municipiul Drobeta-Turnu Severin, localitatea Varciorova	(6,00)
2.626.	Locul fosilifer Pietrele Rosii	Comuna Husnicioara	1,00

Mures County

2.627.	Rezervatia de bujori Zau de Campie	Comuna Zau de Campie	3,10
2.628.	Padurea Mociar	Comuna Solovastru	48,00
2.629.	Padurea Sabed	Comuna Cevasu de Campie	59,00
2.630.	Rezervatia cu lalea pestrita Valenii de Mures	Comuna Brancovenesti	2,50
2.631.	Lacul Faragau	Comuna Faragau	35,00

2.632.	Rezervatia de stejar pufos	Municipiul Sighisoara	11,90
2.633.	Molidul de rezonanta din padurea Lapusna	Comuna Gurghiu	77,80
2.634.	Arboretul cu Chamaecyparis lawsoniana	Comuna Sangiorgiu de Padure	5,80
2.635.	Stejarii secolari de la Breite	Municipiul Sighisoara	70,00
2.636.	Lacul Ursu si arboretele de pe saraturi	Orasul Sovata	79,00
2.637.	Poiana cu narcise Gurghiu	Comuna Gurghiu	3,00
2.638.	Defileul Deda-Toplita	Comunele Deda si Stancenii	6.000,00
2.639.	Defileul Muresului	Comunele Lunca Bradului si Rastolnita	7.733,00
2.640.	Stejarii secolari de la Sangiorgiu de Mures	Comuna Sangiorgiu de Mures	0,10

#### Neamt County

2.641.	Polita cu Crini PN-J	Comuna Ceahlau	(370,00)
2.642.	Cascada Duruitoarea PN-J	Comuna Ceahlau	(1,00)
2.643.	Cheile Bicazului PN-I	Comuna Bicaz-Chei	(11.600,00)
2.644.	Stanca Serbesti	Comuna Stefan cel Mare	5,00
2.645.	Rezervatia forestiera Dobreni	Comuna Dobreni	37,00
2.646.	Piatra Teiului	Comuna Poiana Teiului	0,20
2.647.	Pestera Tosorog	Comuna Bicazul Ardelean	0,10
2.648.	Pestera Munticelu	Comuna Bicazul Ardelean	1,00
2.649.	Dealul Vulpiei-Botoaia (Ochiul de Stepa)	Municipiul Piatra-Neamt	2,00
2.650.	Padurea Gosman	Comuna Tarcau	175,00
2.651.	Locul fosilifer Cozla	Municipiul Piatra-Neamt	10,00
2.652.	Cheile Sugaului	Comuna Bicaz-Chei	90,00
2.653.	Locul fosilifer Cernegura	Municipiul Piatra-Neamt	198,20
2.654.	Locul fosilifer Pietricica	Municipiul Piatra-Neamt	39,50
2.655.	Locul fosilifer Agircia	Municipiul Piatra-Neamt	1,00
2.656.	Codrii de Arama	Comuna Agapia	7,00
2.657.	Codrii de Argint	Comuna Agapia	2,00
2.658.	Rezervatia de Zimbri - Neamt	Comuna Vanatori-Neamt	11.500,00
2.659.	Rezervatia forestiera Pangarati	Comuna Pangarati	2,00
2.660.	Paraul Borcuta	Comuna Borca	1,20
2.661.	Lacul Izvorul Muntelui	Orasul Bicaz	150,00
2.662.	Rezervatia faunistica Brates	Comuna Tarcau	30,70
2.663.	Rezervatia faunistica Borca	Comuna Borca	357,00

#### Olt County

2.664.	Padurea Seaca Optasani	Comuna Spineni, satul Optasani	135,00
2.665.	Padurea Branistea Catarilor	Comunele Obarsia si Stefan cel Mare	301,30
2.666.	Padurea Calugareasca	Comuna Radomiresti, satul Craciunel	40,00
2.667.	Casa Padurii din Padurea Potelu	Comuna Ianca	1,50
2.668.	Rezervatia de bujori a Academiei	Comuna Stoicanesti	54,90
2.669.	Rezervatia de arborete de garnita	Comuna Poboru	121,00

#### Prahova County

2.670.	Muntele de Sare Slanic Prahova	Orasul Slanic	2,00
2.671.	Locul fosilifer Plaiul Hotilor	Orasul Sinaia	6,00
2.672.	Abruptul Prahovean Bucegi PN-H	Orasele Busteni si Sinaia	(3.478,00)
2.673.	Muntii Coltii lui Barbes PN-H	Orasul Sinaia	(1.513,00)
2.674.	Tigaile din Ciucas	Comuna Maneciu, satul Cheia	3,00
2.675.	Arinisul de la Sinaia-Cumpatul	Orasul Sinaia	32,10

#### Satu Mare County

2.676.	Padurea Urziceni	Comuna Urziceni	38,00
2.677.	Dunele de nisip Foieni	Comuna Foieni	10,00

2.678. Tinoavele din Muntii Oas	Comuna Camarzana	1,00
2.679. Mlastina Vermes	Comuna Sanislau	10,00
2.680. Cursul inferior al Raului Tur	Comuna Calinesti-Oas	43,00 km
2.681. Padurea Runc	Comuna Pomi, satul Borlesti	68,50

#### Salaj County

2.682. Gradina Zmeilor	Comuna Balan, satul Galgau Almasului	3,00
2.683. Pietrele Mosu si Baba	Comuna Napradea, satul Somes Guruslau	0,20
2.684. Poiana cu narcise de la Racas-Hida	Comuna Hida, satul Racas	1,50
2.685. Calcarele de Rona	Orasul Jibou, localitatea Rona	0,50
2.686. Balta Cehei	Orasul Simleu Silvaniei, localitatea Cehei	18,20
2.687. Lunca cu lalea pestrita - Valea Salajului	Orasul Cehu Silvaniei	10,00
2.688. Rezervatia peisagistica Stana Clitului	Comuna Babeni, satul Clit	16,00
2.689. Gresiiile de pe Stanca Dracului	Comuna Hida	1,00
2.690. Rezervatia peisagistica Tusa-Barcau	Comuna Sag, satul Tusa	15,00
2.691. Mlastina de la Iaz	Comuna Plopis, satul Iaz	10,00
2.692. Padurea "La Castani"	Comuna Ileanda, satul Rogna	7,80
2.693. Stejarisul Panic	Comuna Hereclean, satul Panic	2,20
2.694. Stejarisul de balta Panic	Comuna Hereclean, satul Panic	1,70

#### Sibiu County

2.695. Lacul fara fund Ocna Sibiului	Orasul Ocna Sibiului	0,20
2.696. Calcarele eocene de la Turnu Rosu - Porcesti	Comuna Turnu Rosu	60,00
2.697. Calcarele cu hippuriti de la Cisnadioara	Orasul Cisnadie, localitatea Cisnadioara	1,00
2.698. Dealul Zackel	Municipiul Sibiu, comuna Slimnic	11,00
2.699. Suvara Sasilor	Orasul Talmaciu	20,00
2.700. Canionul Mihaileni	Comuna Mihaileni	16,00
2.701. Valea Balii	Comuna Cartisoara	180,00
2.702. Vulcanii Noroiosi Hasag	Comuna Loamnes, satul Hasag	1,00
2.703. La Grumaji	Comuna Jina	2,00
2.704. Pintelul din coasta Jinei	Comuna Jina	2,00
2.705. Iezerele Cindrelului	Comuna Gura Raului	609,60
2.706. Parcul Natural Dumbrava Sibiului	Municipiul Sibiu	993,00
2.707. Parcul Natural Cindrel	Comuna Jina	9.873,00
2.708. Masa Jidovului	Comuna Jina	2,00
2.709. Golul Alpin al Muntilor Fagaras intre Podragu - Suru	Comuna Arpasu de Jos si orasul Avrig	6.989,20

#### Suceava County

2.710. Doisprezece Apostoli PN-K	Comuna Dorna Candrenilor	(200,00)
2.711. Rezervatia Bila-Lala PN-G	Comuna Carlibaba	(325,10)
2.712. Moara Dracului	Municipiul Campulung Moldovenesc	1,30
2.713. Piatra Tibaului	Comuna Carlibaba	20,30
2.714. Piatra Buhei	Municipiul Campulung Moldovenesc	2,00
2.715. Tinovul Poiana Stampei	Comuna Poiana Stampei	681,80
2.716. Fanatele montane Todirescu	Municipiul Campulung Moldovenesc	44,30
2.717. Tinovul Sarul Dornei	Comuna Sarul Dornei	36,00
2.718. Fanatele seculare Ponoare	Comuna Bosanci	24,50
2.719. Fanatele seculare Frumoasa	Comuna Moara	9,50
2.720. Tinovul Gaina - Lucina	Comuna Moldova-Sulita	1,00

2.721. Padurea (Quercetumul) Crujana	Comuna Patrauti	39,40
2.722. Pietrele Doamnei	Municipiul Campulung Moldovenesc	253,00
2.723. Codrul Secular Slatioara	Comuna Stulpicani, satul Slatioara	1.064,20
2.724. Codrul Secular Giupalau	Comuna Pojorata	309,50
2.725. Rachitisul Mare	Comuna Moldova-Sulita	116,40
2.726. Fagetul Dragomirna	Comuna Mitocul Dragomirnei	134,80
2.727. Padurea Zamostea - Lunca	Comuna Zamostea	107,60
2.728. Cheile Zugrenilor	Orasul Vatra Dornei	150,10
2.729. Cheile Lucavei	Comuna Moldova-Sulita	24,30
2.730. Jnepenisul cu Pinus cembra-Calimani PN-K	Orasul Vatra Dornei	(384,20)
2.731. Piatra Pinului si Piatra Soimului	Orasul Gura Humorului	0,50
2.732. Clipa de calcare triasice Paraul Cailor	Comuna Breaza	0,10
2.733. Stratele cu Aptychus de la Pojorata	Comuna Fundu Moldovei	1,00
2.734. Fanatele seculare de la Calafindesti	Comuna Calafindesti	17,30

#### Timis County

2.735. Padurea Cenad	Comuna Cenad	279,20
2.736. Lunca Pogonisului	Comunele Tormac si Sacosu Turcesc	75,50
2.737. Movila Sisitak	Comuna Sanpetru Mare	0,50
2.738. Arboretumul Bazos	Comuna Remetea Mare	60,00
2.739. Locul fosilifer Radmanesti	Comuna Bara	4,00
2.740. Mlastinile Satchinez	Comuna Satchinez	236,00
2.741. Padurea Bistra	Comuna Ghiroda	19,90
2.742. Beba Veche	Comuna Beba Veche, satul Pordeanu	2.187,00
2.743. Mlastinile Murani	Comuna Pischia, satul Murani	200,00
2.744. Insula Mare Cenad	Comuna Cenad	3,00
2.745. Insula Igris	Comuna Sanpetru Mare	3,00
2.746. Saraturile Dinias	Comuna Peciu Nou	4,00
2.747. Pajistea cu narcise Batesti	Orasul Faget	20,00
2.748. Lacul Surduc	Comuna Fardea	362,00

#### Tulcea County

2.749. Saraturile Murighiol DD-A	Comuna Murighiol	(87,00)
2.750. Rosca - Buhaiova DD-A	Comuna Chilia Veche	(9.625,00)
2.751. Padurea Letea DD-A	Comuna C.A. Rosetti	(2.825,00)
2.752. Grindul si Lacul Raducu DD-A	Comuna C.A. Rosetti	(2.500,00)
2.753. Lacul Nebunu DD-A	Comuna Pardina	(115,00)
2.754. Complexul Vatafu - Lungulet DD-A	Orasul Sulina	(1.625,00)
2.755. Padurea Caraorman DD-A	Comuna Crisan	(2.250,00)
2.756. Arinisul Erenciuc DD-A	Comuna Sfantu Gheorghe	(50,00)
2.757. Insula Popina DD-A	Comuna Sarichioi	(98,00)
2.758. Complexul Sacalin Zatoane DD-A	Comuna Sfantu Gheorghe	(21.410,00)
2.759. Complexul Periteasca - Leahova DD-A	Comunele Jurilovca si Murighiol	(4.125,00)
2.760. Capul Dolosman DD-A	Comuna Jurilovca	(125,00)
2.761. Lacul Potcoava DD-A	Comuna Sfantu Gheorghe	(652,00)
2.762. Lacul Belciug DD-A	Comuna Sfantu Gheorghe	(110,00)
2.763. Lacul Rotundu DD-A	Orasul Isaccea	(228,00)
2.764. Padurea Valea Fagilor PN-P	Comuna Luncavita	(154,00)
2.765. Rezervatia Naturala Dealul Bujorului	Orasul Babadag	50,80
2.766. Rezervatia de liliac Valea Oilor	Orasul Babadag	0,35
2.767. Rezervatia de liliac Fantana Mare	Comuna Ciucurova, satul Fantana Mare	0,30
2.768. Varful Secarul	Comuna Ciucurova, satul Atmagea	34,50
2.769. Rezervatia botanica Korum Tarla	Orasul Babadag	2,00
2.770. Locul fosilifer Dealul Bujoarele	Comuna Turcoaia	8,00
2.771. Rezervatia Geologica Agighiol	Comuna Valea Nucarilor, satul Agighiol	9,70
2.772. Padurea Niculitel	Comuna Niculitel	11,00



Vaslui County

2.773. Locul fosilifer Malusteni	Comuna Malusteni	10,00
2.774. Locul fosilifer Nisiparia Hulubat	Municipiul Vaslui	2,50
2.775. Movila lui Burcel	Comuna Miclesti	12,00
2.776. Tanacu - Coasta Rupturile	Comuna Tanacu	6,00
2.777. Padurea Badeana	Comuna Tutova	126,70
2.778. Padurea Harboanca	Comuna Stefan cel Mare	43,10
2.779. Padurea Balteni	Comuna Balteni	22,00
2.780. Faneata de la Glodeni	Orasul Negresti, satul Glodeni	6,00

Valcea County

2.781. Piramidele din Valea Stancioiului	Municipiul Ramnicu Valcea, comuna Goranu	12,00
2.782. Piramidele de la Slatioara	Comunele Slatioara si Stroesti	10,50
2.783. Pestera Caprelor	Orasul Baile Olanesti	0,50
2.784. Avenul Piciorul Boului	Comuna Caineni	0,10
2.785. Pestera Liliecilor	Comuna Costesti	1,00
2.786. Pestera Munteanu - Murgoci	Orasul Olanesti	1,00
2.787. Pestera Pagodelor	Orasul Olanesti	0,30
2.788. Pestera Rac	Orasul Olanesti	0,20
2.789. Pestera Valea Bistrita	Orasul Olanesti	0,25
2.790. Pestera cu Lac	Orasul Olanesti	0,10
2.791. Pestera cu Perle	Orasul Olanesti	0,50
2.792. Pestera Arnautilor	Orasul Olanesti	0,40
2.793. Pestera Clopot	Orasul Olanesti	0,10
2.794. Jnepenisul Stricatul	Comuna Voineasa	15,00
2.795. Mlastina Mosoroasa	Orasul Olanesti	0,25
2.796. Padurea Tisa Mare	Comuna Lungesti	50,00
2.797. Padurea Silea	Comuna Lungesti, satul Fumureni	25,00
2.798. Padurea Calinesti - Brezoi	Orasul Brezoi	200,00
2.799. Caldarea Galcescu	Comuna Voineasa	200,00
2.800. Rezervatia Miru-Bora	Comuna Voineasa	25,00
2.801. Rezervatia Ocnele Mari	Orasul Ocnele Mari	15,00
2.802. Rezervatia Radita - Manzu	Orasul Olanesti	10,00
2.803. Iezerul Latorita	Comuna Malaia	10,00
2.804. Muntele Stogu	Orasul Olanesti	10,00
2.805. Padurea Latorita	Comuna Malaia	7,10
2.806. Rezervatia Sterpu-Dealul Negru	Comuna Voineasa	5,00
2.807. Rezervatia Cristesti	Comuna Voineasa	3,00
2.808. Padurea Valea Cheii	Orasul Olanesti	1,50
2.809. Rezervatia paleontologica Golesti	Comuna Golesti	10,00

Vrancea County

2.810. Caldarele Zabalei - Zarna Mica - Raoaza	Comuna Naruja	350,00
2.811. Focul Viu de la Andreiasu de Jos	Comuna Andreiasu de Jos	12,00
2.812. Muntele Goru	Comuna Naruja	388,10
2.813. Lacul Negru - Cheile Narujei I	Comuna Nistoresti	20,00
2.814. Padurea Verdele - Cheile Narujei II	Comuna Nistoresti	250,00
2.815. Padurea Cenaru	Comuna Andreiasu de Jos	383,20
2.816. Padurea Lepsa-Zboina	Comuna Tulnici, satul Lepsa	210,70
2.817. Padurea Schitu-Dalhauti	Comuna Carligele	188,20
2.818. Cascada Misina	Comuna Nistoresti	183,50
2.819. Groapa cu Pini	Comuna Tulnici	11,10
2.820. Padurea Reghiu - Scruntaru	Comuna Reghiu	95,70
2.821. Rapa Rosie - Dealul Morii	Comuna Tulnici	49,60
2.822. Stramtura - Coza	Comuna Tulnici	15,00
2.823. Rezervatia Algheanu	Comuna Vranceaia	10,00
2.824. Cascada Putnei	Comuna Tulnici, satul Lepsa	10,00
2.825. Paraul Bozu	Comuna Valea Sarii, satul Prisaca	5,00

2.826. Valea Tisitei  
2.827. Lunca Siretului

Comuna Tulnici  
Municipiul Focsani

307,00  
388,40

### C. THE MAIN PROTECTED VIRGIN FORESTS

Nr.	Name of the forest	Surface [ha]	Type of forest
1	Piatra Craiului	1,932 + 1,459	Spruce forest, Mixed beech and coniferous
2	Runcu-Grosi	932	Quercus sessiliflora forests
3	Vorona	150	Mixed forest of Quercus sessiliflora, beech and lime
4	Tudora	120	Mixed forest of Quercus sessiliflora, beech and lime
5	Bucegi	1,634 + 3,748	Larch, spruce forests; mixed beech and fir forest
6	Izvoarele Nerei	6,261	Beech forests
7	Domogled	2,743	Black pine (Pinus nigra var. bannatica) forest; Beech forest on limestone
8	Dognecea Forest	316	Mixed forests of Q. sessiliflora, Q. cerris, Q. frainetto, lime and beech
9	Rachiteanu Forest	1,200	Montane beech forest
10	Humosu	73	Hill beech forest
11	Slatioara	854	Mixed forest of beech, fir and spruce
12	Giumalau	314	Spruce forests
13	Letea	2,825	Oak, ash and poplar forest on maritime sands
14	Caraorman	2,250	Oak, ash and poplar forest on maritime sands

15	Latorita	7	Larch forests
16	Retezat	13,000	Spruce forest; Mixed beech, fir and spruce forest, beech forest; pine forest
17	Calimani	-	Mixed forest of spruce and Pinus cembra; spruce forests
18	Polita cu Crini	370	Mixed spruce, larch, spruce, beech forest; Larch and spruce forests
19	Cozia	-	Beech forests; mixed beech- coniferous forest; Q. sessiliflora forest
20	Vidalm	-	Larch forests

ANNEX VIII  
PLANT AND ANIMAL SPECIES WITH A SPECIAL CONSERVATION STATUS IN ROMANIA

A. PLANT SPECIES

TAXON	1	2	3	4
<b>PTERIDOPHYTA</b>				
<b>Marsileaceae</b>				
<i>Marsilea quadrifolia</i>	*	*		
<b>Aspleniaceae</b>				
<i>Asplenium adnigrum</i>	*	*		
<b>Lycopodiaceae</b>				
<i>Lycopodium</i> spp.			*	
<b>GYMNOSPERMAE</b>				
<b>CONIFERALES</b>				
<b>Taxaceae</b>				
<i>Taxus baccata</i>				*
<b>Pinaceae</b>				
<i>Pinus cembra</i>				*
<b>ANGIOSPERMAE</b>				
<b>Alismataceae</b>				
<i>Caldesia parnassifolia</i>	*	*		
<b>Compositae</b>				
<i>Ligularia sibirica</i>	*	*		
<i>Cirsium brachycephalum</i>	*	*		
<i>Serratula lycopifolia</i>	*	*		
<i>Arnica montana</i>			*	
<i>Leontopodium alpinum</i>				*
<b>Droseraceae</b>				
<i>Aldrovanda vesiculosa</i>	*	*		
<b>Labiatae</b>				
<i>Dracocephalum austriacum</i>	*	*		
<b>Orchidaceae</b>				
<i>Cypripedium calceolus</i>	*	*		*
<i>Liparis loeselii</i>	*	*		
<b>Liliaceae</b>				
<i>Colchicum arenarium</i>	*	*		
<i>Ruscus aculeatus</i>			*	
<b>Iridaceae</b>				
<i>Iris humilis arenaria</i>	*	*		
<i>Iris aphylla hungarica</i>	*	*		
<i>Gladiolus palustris</i>	*	*		
<b>Ranunculaceae</b>				
<i>Pulsatilla patens</i>	*	*		
<b>Santalaceae</b>				
<i>Thesium ebracteatum</i>	*	*		
<b>Saxifragaceae</b>				
<i>Saxifraga hirculus</i>	*	*		
<b>Scrophulariaceae</b>				
<i>Veronica micrantha</i>	*	*		
<i>Pedicularis exaltata</i>	*	*		
<i>Tozzia carpathica</i>	*	*		
<i>Scrophularia grandiflora</i>			*	
<b>Umbeliferae</b>				
<i>Angelica palustris</i>	*	*		
<i>Angelica archangelica</i>				*
<i>Apium repens</i>	*	*		

<i>Ferula sadleriana</i>		*	*		
<b>Paeoniaceae</b>					
<i>Paeonia officinalis banatica</i>		*	*		
<i>Paeonia tenuifolia</i>		*			
<b>Campanulaceae</b>					
<i>Campanula romanica</i>		*			
<b>Ericaceae</b>					
<i>Arcostaphylos uva ursi</i>		*			
<b>Oleaceae</b>					
<i>Syringa josikaea</i>		*			
<b>Amaryllidaceae</b>					
<i>Galanthus nivalis</i>				*	
<b>Gentianaceae</b>					
<i>Gentiana lutea</i>				*	*
<b>BRYOPHYTA</b>					
<i>Dicranum viride</i>			*		
<i>Drepanocladus vernicosus</i>			*		
<i>Leucobryum glaucum</i>				*	
<i>Sphagnum</i> spp. (except <i>S. pylasii</i> )				*	
<b>LICHENES</b>					
<i>Cladonia</i> subgenus <i>Cladina</i>				*	

\*

1. Plant and animal species whose conservation requires the strict protection (EU category)- annex no. 4, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
2. Plant and animal species whose conservation requires designation of special areas conservation and of the special areas of avifaunistic protection (EU category)- annex no. 3, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
3. Species of plants and animals of communitary interest whose harvesting and exploitation needs management measures (EU category)- annex no. 5, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
4. Natural Monuments (according to Decree No. 237/1950, supplemented by Council of Ministers Decision No. 518/1954)

## B. ANIMAL SPECIES

TAXON		1	2	3	4	5	6
<b>MAMMALIA</b>							
<b>INSECTIVORA</b>	Insect-eating mammals						
<b>Soricidae</b>	Shrews						
<b>Sorex alpinus</b>		*					
<i>Neomys anomalus</i>		*					
<b>CHIROPTERA</b>	Bats						
<b>Rhinolophidae</b>							
● <b>Rhinolophus blasii</b>		*	*				
○ <i>Rhinolophus euryale</i>		*	*				
○ <i>Rhinolophus ferrumequinum</i>		*	*				
○ <i>Rhinolophus hipposideros</i>		*	*				

◦ <i>Rhinolophus mehelyi</i>		*	*				
<b>Vespertilionidae</b>		*	*				
● <b>Barbastella barbastellus</b>		*	*				
<i>Miniopterus schreibersi</i>		*	*				
<i>Myotis bechsteini</i>		*	*				
<i>Myotis blythi</i>		*	*				
<i>Myotis capaccinii</i>		*	*				
<i>Myotis dasycneme</i>		*	*				
<i>Myotis emarginatus</i>		*	*				
<i>Myotis myotis</i>		*	*				
<i>Vespertilio murinos</i>		*	*				
<b>MICROCHIROPTERA</b>							
All the species							
<b>LAGOMORPHA</b>							
<b>Leporidae</b>							
<b>Lepus europaeus</b>	Brown hare			*		*	
<i>Oryctolagus cuniculus</i>	Wild rabbit of Europe			*		*	
<b>RODENTIA</b>	Rodents						
<b>Gliridae</b>	Dormice						
<b>Muscardinius avellanarius</b>		*					
<b>Dryomys nitedula</b>		*					
<b>Sciuridae</b>	Ground squirrels						
● <b>Spermophilus suslicus</b>		*	*				
<i>Spermophilus citellus</i> ( <i>Citellus citellus</i> )		*	*				
<i>Sciurus vulgaris</i>	Squirrel			*		*	
<i>Marmota marmota</i>	Marmot			*		*	
<b>Cricetidae</b>	Hamsters						
<b>Cricetus cricetus</b>		*	*				*
<b>Microtidae</b>	Voles						
<b>Microtus tauricus</b>		*	*				
<b>Muridae</b>	Common rats and mice						
<b>Nannospalax leucodon</b>	Mole rat	*	*				
<b>Ondathra zibethica</b>	Muskrat			*		*	
<b>Zapodidae</b>	Jumping mice						
<b>Sicista betulina</b>		*					
<i>Sicista subtilis</i>		*	*				
<b>Castoridae</b>	Beavers						
<b>Castor fiber</b>		*	*				
<b>Myocastoridae</b>							
<b>Myocastor coypus</b>				*		*	
<b>CARNIVORA</b>							
<b>Ursidae</b>	Bears						
● <b>Ursus arctos</b>	European brown bear	*	*				*
<b>Mustelidae</b>							
<b>Martes martes</b>	Pine marten			*		*	
<b>Martes foina</b>	Beech marten			*		*	
● <b>Lutra lutra</b>	Otter	*	*				*
◦ <i>Mustela lutreola</i>	The Old World mink	*	*				*
<i>Mustela putorius</i>	Polecat			*		*	
<i>Mustela eversmanii</i>				*		*	
<i>Mustela erminea</i>	Stoat			*		*	
<i>Mustela nivalis</i>	Common weasel			*		*	
<i>Mustela vison</i>				*		*	
<i>Meles meles</i>	Badger			*		*	
<i>Vormela peregusna</i>				*		*	

<b>Canidae</b>							
<b>Canis lupus</b>	Wolf	*					*
<i>Canis aureus</i>	Jackal			*		*	
<i>Nyctereutes procyonoides</i>	Enot			*		*	
<i>Vulpes vulpes</i>	Fox			*		*	
<b>Felidae</b>							
<b>Lynx lynx</b>	Lynx		*	*	*	*	
<i>Felis silvestris</i>	Wild cat	*					*
<b>Phocidae</b>							
● <b>Monachus monachus</b>	Monk seal	*	*				
<b>ARTIODACTYLA</b>							
<b>Cervidae</b>							
<b>Alces alces</b>	European elk	*	*				*
<b>Capreolus capreolus</b>	Roe deer			*		*	
<b>Cervus elaphus</b>	Red deer			*		*	
<b>Dama dama</b>	Fallow deer			*		*	
<b>Ovis aries musimon</b>	Moufflon			*		*	
<b>Bovidae</b>							
● <b>Bison bonasus</b>	European bison	*	*				*
<i>Rupicapra rupicapra</i>	Chamois			*	*	*	
<b>Suidae</b>							
<i>Sus scrofa</i>	Wild boar			*		*	
<b>CETACEA</b>							
<b>Tursiops truncatus</b>		*	*				
<i>Phocoena phocoena</i>		*	*				
<i>Delphinus delphis</i>		*	*				
<b>AVES</b>							
<b>GAVIIFORMES</b>							
<b>Gaviidae</b>							
<b>Gavia stellata</b>	Black-throated diver	*	*				*
<i>Gavia arctica</i>	Red-throated diver		*				*
<i>Gavia immer</i>	Great northern diver		*				*
<b>PODICIPEDIFORMES</b>							
<b>Podicipedidae</b>							
<b>Tachybaptus ruficollis</b>	Little grebe	*					*
<i>Podiceps spp.</i>	Grebe	*					*
<b>PROCELLARIIFORMES</b>							
<b>Procellariidae</b>							
<b>Puffinus yelkouan</b>	Levantine shear-water		*				*
<b>PELECANIFORMES</b>							
<b>Pelecanidae</b>							
● <b>Pelecanus onocrotalus</b>	White pelican		*		*		*
<i>Pelecanus crispus</i>	Dalmatian pelican		*		*		*
<b>Phalacrocoracidae</b>							
<b>Phalacrocorax aristotelis</b>	Shag		*				*
<i>Phalacrocorax pygmaeus</i>	Pygmy cormorant		*				*
<i>Phalacrocorax carbo</i>	Cormorant			*		*	
<b>CICONIIFORMES</b>							
<b>Ardeidae</b>							
<b>Botaurus stellaris</b>	Bittern		*				*
<i>Ixobrychus minutus</i>	Little bittern		*				*
<i>Nycticorax nycticorax</i>	Night heron		*				*
<i>Ardeola ralloides</i>	Squacco heron		*				*
<i>Bubulcus ibis</i>	Cattle egret		*				*
<i>Egretta garzetta</i>	Little egret		*		*		*
<i>Egretta alba</i>	White egret		*		*		*
<i>Ardea purpurea</i>	Purple heron		*				*
<i>Ardea cinerea</i>	Grey heron			*			*

<b>Threskiornithidae</b>							
<b>Plegadis falcinellus</b>	Glossy ibis		*				*
<i>Platalea leucorodia</i>	Spoonbill		*		*		*
<b>Ciconiidae</b>							
<b>Ciconia ciconia</b>	White stork		*				*
<i>Ciconia nigra</i>	Black stork		*				*
<b>PHOENICOPTERIFORMES</b>							
<b>Phoenicopteridae</b>							
<b>Phoenicopterus ruber</b>	Flamingo		*				*
<b>ANSERIFORMES</b>							
<b>Anatidae</b>							
<b>Cygnus olor</b>	Mute swan		*				*
<i>Cygnus bewickii</i>	Bewick's swan		*				*
<i>Cygnus cygnus</i>	Whooper swan		*				*
◉ <i>Anser erythropus</i>	Lesser-white-fronted goose		*				*
<i>Anser brachyrhynchus</i>	Pink-footed goose			*		*	
<i>Anser albifrons</i>	White-fronted goose			*		*	
<i>Anser anser</i>	Greylag goose			*		*	
<i>Anser fabalis fabalis</i>	Bean goose			*		*	
<i>Anser fabalis rossicus</i>	Bean goose			*		*	
<i>Anas penelope</i>	Wigeon			*		*	
<i>Anas platyrhynchos</i>	Mallard			*		*	
<i>Anas crecca</i>	Teal			*		*	
<i>Anas querquedula</i>	Garganey			*		*	
<i>Anas acuta</i>	Pintail			*		*	
<i>Anas strepera</i>	Gadwall			*		*	
<i>Anas clypeata</i>	Shoveler			*		*	
<i>Aythya ferrina</i>	Pochard			*		*	
<i>Aythya fuligula</i>	Tufted duck			*		*	
<i>Aythya marila</i>	Scaup			*		*	
◉ <i>Aythya nyroca</i>	Ferruginous duck		*			*	
<i>Branta leucopsis</i>	Barnacle goose	*	*				*
<i>Branta bernicla</i>	Brent goose			*		*	
<i>Branta ruficollis</i>	Red-breasted goose		*				*
<i>Tadorna ferruginea</i>	Ruddy shelduck		*		*		*
<i>Tadorna tadorna</i>	Shelduck		*		*		*
<b>Netta rufina</b>	Red-crested pochard			*		*	
<b>Somateria molissima</b>	Eider			*		*	
<b>Bucephala clangula</b>	Goldeneye			*		*	
<b>Mergus albellus</b>	Smew	*					*
<b>Mergus merganser</b>	Goosander			*		*	
<b>Melanitta fusca</b>	Velvet scoter			*		*	
<b>Melanitta nigra</b>	Common scoter			*		*	
<b>Mergus serrator</b>	Red-breasted merganser			*		*	
<b>Clangula hyemalis</b>	Long-tailed duck			*		*	
◉ <b>Oxyura leucocephala</b>	White-headed duck		*				
<b>FALCONIFORMES</b>							
<b>Pandionidae</b>							
<b>Pandion haliaetus</b>	Osprey		*				*
<b>Accipitridae</b>			*				*
◉ <b>Haliaeetus albicilla</b>	White-tailed eagle		*				*
<b>Milvus migrans</b>	Black kite		*				*
<i>Milvus milvus</i>	Red kite		*				*
<i>Circaetus gallicus</i>	Short-toed eagle		*				*
<i>Neophron percnopterus</i>	Egyptian vulture		*		*		*
<i>Gyps fulvus</i>	Griffon vulture		*		*		*
<i>Aegypius monachus</i>	Black vulture		*		*		*



<b>Circus aeruginosus</b>	Marsh harrier		*				*
<i>Circus cyaneus</i>	Hen harrier		*				*
◉ <i>Circus macrourus</i>	Pallid harrier		*				*
<i>Circus pygargus</i>	Montagu's harrier		*				*
<i>Accipiter brevipes</i>	Levant sparrow hawk		*				*
<i>Accipiter</i> spp.	hawk	*					*
<i>Buteo rufinus</i>	Long-legged buzzard		*				*
<i>Buteo</i> spp.	Buzzard	*					*
<i>Pernis apivorus</i>	Honey buzzard		*				*
<i>Hieraetus pennatus</i>	Booted eagle		*				*
<i>Hieraetus fasciatus</i>	Bonelli's eagle		*				*
<i>Gypaetus barbatus</i>	Bearded vulture		*		*		*
<i>Aquila pomarina</i>	Lesser-spotted eagle		*				*
◉ <i>Aquila clanga</i>	Spotted eagle		*				*
◉ <i>Aquila heliaca</i>	Imperial eagle		*		*		*
<i>Aquila chrysaetos</i>	Golden eagle		*		*		*
<i>Aquila</i> spp.	Eagle	*					*
<b>Falconidae</b>							
● <b>Falco naumanni</b>	Lesser kestrel		*				*
<i>Falco columbarius</i>	Merlin		*				*
<i>Falco vespertinus</i>	Red-footed falcon		*				*
◉ <i>Falco cherrug</i>	Saker		*				*
<i>Falco peregrinus</i>	Peregrine		*				*
<i>Falco tinunculus</i>	Kestrel	*					*
<i>Falco subbuteo</i>	Hobby	*					*
<b>GALLIFORMES</b>							
<b>Tetraonidae</b>							
<b>Tetrao urogallus</b>	Capercaille			*	*	*	
<i>Tetrao tetrix</i>	Black grouse		*		*		*
<i>Tetrastes bonasia</i>	Hazel grouse			*		*	
<b>Phasianidae</b>							
<b>Perdix perdix</b>	Grey partridge			*		*	
<i>Coturnix coturnix</i>	Quail			*		*	
<i>Phasianus colchicus</i>	Pheasant			*		*	
<b>GRUIFORMES</b>							
<b>Rallidae</b>							
<b>Crex crex</b>	Corncrake			*			*
<i>Porzana pusilla</i>	Baillon's crake			*			*
<i>Porzana porzana</i>	Spotted crake			*			*
<i>Porzana parva</i>	Little crake		*				*
<i>Gallinula chloropus</i>	Moorhen			*		*	
<i>Fulica atra</i>	Coot			*		*	
<i>Rallus aquaticus</i>	Water rail	*					*
<b>Gruidae</b>							
<b>Grus grus</b>	Crane	*	*				*
<i>Anthropoides virgo</i>	Demoiselle crane	*					*
<b>Otididae</b>							
● <b>Otis tarda</b>	Great bustard		*		*		*
<i>Chlamidotis undulata</i>	Houbara bustard		*				*
<i>Tetrax tetrax</i>	Little bustard		*		*		*
<b>CHARADRIFORMES</b>							
<b>Haematopodidae</b>							

<b>Haematopus ostralegus</b>	Oystercatcher	*					*
<i>Recurvirostridae</i>							
<b>Himantopus himantopus</b>	Black-winged stilt		*		*		*
<b>Recurvirostra avosetta</b>	Avocet		*		*		*
<b>Burhinidae</b>							
<b>Burhinus oedicnemus</b>	Stone curlew		*				*
<b>Glareolidae</b>							
<b>Glareola nordmanni</b>	Black-winged pratincole		*				*
<i>Glareola praticola</i>	Collared pratincole		*				*
<b>Charadriidae</b>							
<b>Charadrius alexandrinus</b>	Kentish plover		*				*
<i>Charadrius morinellus</i>	Dotterel		*				*
<i>Charadrius</i> spp.		*					
<i>Vanellus vanellus</i>	Lapwing					*	
<i>Pluvialis apricaria</i>	Golden plover						
<i>Chettusia leucura</i>	White-tailed plover						
<b>Scolopacidae</b>							
<b>Calidris alpina</b>	Dunlin		*				*
<b>Calidris</b> spp.		*					
<b>Philomachus pugnax</b>	Ruff			*		*	
◦ <i>Gallinago gallinago</i>	Snipe			*		*	
<i>Gallinago media</i>	Great snipe		*				*
<i>Limosa limosa</i>	Black-tailed godwit		*	*		*	
◦ <i>Numenius tenuirostris</i>	Slender-billed curlew		*				*
<i>Numenius arquata</i>	Common curlew		*				
<i>Numenius</i> spp.	Curlew	*					*
<i>Actitis hypoleucos</i>	Common sandpiper	*					*
<i>Arenaria interpres</i>	Turnstone	*					*
<i>Xenus cinereus</i>	Terek sandpiper	*					*
<i>Limicola falcinellus</i>	Broad-bill sandpiper	*					*
<i>Tringa glareola</i>	Wood sandpiper		*				*
<i>Tringa</i> spp.	Sandpiper	*					*
<i>Scolopax rusticola</i>	Woodcock			*		*	
<i>Lymnocyptes minimus</i>	Jack snipe			*		*	
<b>Phalaropodidae</b>							
<b>Phalaropus lobatus</b>	Red-necked phalarope		*				*
<b>Phalaropus</b> spp.	Phalarope	*					*
<b>Stercorariidae</b>							
<i>Stercorarius</i> spp.	Skua	*					*
<b>Laridae</b>							
<b>Larus melanocephalus</b>	Mediterran gull			*			*
<i>Larus genei</i>	Slender-billed gull			*			*
<i>Larus minutus</i>	Little gull			*			*
<i>Larus</i> spp.		*					*
<b>Sternidae</b>							
<b>Gelochelidon nilotica</b>	Gull-billed tern	*	*				*
<i>Sterna caspia</i>	Caspian tern	*	*				*
<i>Sterna sandvicensis</i>	Sandwich tern	*					*
<i>Sterna hirundo</i>	Common tern	*	*				*
<i>Sterna albifrons</i>	Little tern	*	*				*
<i>Chlidonias hybridus</i>	Whiskered tern	*	*				*
<i>Chlidonias niger</i>	Black tern	*	*				*
<i>Uria aalge</i>	Guillemot		*				*
<b>PTEROCLIDIFORMES</b>							
<b>Syrrhaptus paradoxus</b>	Palla's sandgrouse	*					*
<b>COLUMBIFORMES</b>							
<b>Columbidae</b>							

<b>Streptopelia turtur</b>	Turtle dove			*			*
<i>Streptopelia decaocto</i>	Collared dove			*		*	
<i>Columba oenas</i>	Stock dove			*		*	
<i>Columba palumbus</i>	Woodpigeon			*		*	
<b>CUCULIFORMES</b>							
<b>Cuculus canorus</b>	Cuckoo	*					*
<b>STRIGIFORMES</b>							
<b>Strigidae</b>							
<b>Bubo bubo</b>	Eagle owl		*				*
<i>Glaucidium passerinum</i>	Pygmy owl		*				*
<i>Asio flammeus</i>	Short-eared owl		*				*
<i>Asio</i> spp.		*					*
<i>Aegolius funereus</i>	Teng-malm's owl		*				*
<i>Otus scops</i>	Scops owl	*					*
<i>Athene noctua</i>	Little owl	*					*
<i>Strix</i> spp.	Owl	*					*
<b>Tytonidae</b>							
<b>Tyto alba</b>	Barn owl	*					*
<b>Upupidae</b>							
<b>Upupa epops</b>	Hoopoe	*					*
<b>CAPRIMULGIFORMES</b>							
<b>Caprimulgus europaeus</b>	Nightjar		*				*
<b>APODIFORMES</b>							
<b>Apodidae</b>							
<i>Apus</i> spp.	Swift	*					*
<b>CORACIIFORMES</b>							
<b>Alcedinidae</b>							
<b>Alcedo atthis</b>	Kingfisher	*	*				*
<b>Meropidae</b>							
<b>Merops apiaster</b>	Bee-eater	*					*
<b>Coraciidae</b>							
<b>Coracias garrulus</b>	Roller		*				*
<b>PICIFORMES</b>							
<b>Picidae</b>							
<b>Jynx torquilla</b>	Wryneck		*				*
<i>Picus canus</i>	Grey headed wood-pecker		*				*
<i>Picus viridis</i>	Green wood-pecker	*					*
<i>Dryocopus martius</i>	Black wood-pecker	*	*				*
<i>Dendrocopos syriacus</i>	Syrian wood-pecker	*	*				*
<i>Dendrocopos medius</i>	Middle-spotted woodpecker	*	*				*
<i>Dendrocopos leucotos</i>	White-backed wood-pecker	*	*				*
<i>Picoides tridactylus</i>	Three-toed wood-pecker		*				*
<b>PASSERIFORMES</b>							
<b>Alaudidae</b>							
<b>Melanocorypha calandra</b>	Calandra lark		*				*
<i>Calandrella brachydactyla</i>	Short-toed lark		*				*
<i>Lullula arborea</i>	Wood lark		*				*
<i>Eremophila alpestris</i>	Horned lark		*				*
<i>Galerida cristata</i>	Crested lark			*		*	
<i>Alauda arvensis</i>	Skylark	*					*
<b>Hirundinidae</b>							
<b>Riparia riparia</b>	Sand martin	*					*
<i>Hirundo</i> spp.	Swallow	*					*
<i>Delichon urbica</i>	House martin	*					*
<b>Motacillidae</b>							
<b>Anthus campestris</b>	Tawny pipit		*				*
<i>Anthus</i> spp.	Pipit	*					*
<i>Motacilla</i> spp.	Wagtail	*					*

<b>Bombycillidae</b>						
<b>Bombycilla garrulus</b>	Waxwing	*				*
<b>Cinclidae</b>						
<i>Cinclus cinclus</i>	Dipper	*				*
<b>Troglodytidae</b>						
<i>Troglodytes troglodytes</i>	Wren	*				*
<b>Prunellidae</b>						
<i>Prunella</i> spp.	Dunnock	*				*
<b>Turdidae</b>						
<b>Oenanthe isabelina</b>	Isabelline wheatear		*			*
<i>Oenanthe pleschanka</i>	Pied wheatear		*			*
<i>Oenanthe hispanica</i>	Black-eared wheatear		*			*
<i>Oenanthe</i> spp.	Wheatear	*				*
<b>Monticola saxatilis</b>	Rock thrush		*			*
<b>Luscinia svecica</b>	Bluethroat		*			*
<i>Luscinia</i> spp.	Nightingale	*				*
<b>Cercotrichas galactotes</b>	Rufous bush robin	*				*
<i>Erithacus rubecula</i>	Robin	*				*
<i>Phoenicurus</i> spp.	Redstart	*				*
<i>Saxicola</i> spp.	Whinchat	*				*
<i>Turdus viscivorus</i>	Thrush			*		*
<i>Turdus philomelos</i>	Song thrush			*	*	
<i>Turdus iliacus</i>	Redwing			*		*
<i>Turdus pilaris</i>	Fieldfare			*		*
<b>Sylviidae</b>						
<b>Acrocephalus paludicola</b>	Aquatic warbler		*			*
<i>Acrocephalus melanopogon</i>	Moustached warbler		*			*
<i>Acrocephalus</i> spp.	warbler	*				*
<b>Sylvia nisoria</b>	Barred warbler		*			*
<i>Sylvia</i> spp.	Warbler	*				*
<b>Cettia cetti</b>	Cetti's warbler	*				*
<i>Locustella</i> spp.	Warbler	*				*
<i>Phylloscopus</i> spp.		*				*
<i>Hipolais</i> spp.	Warbler	*				*
<b>Regulidae</b>						
<i>Regulus</i> spp.	Crest	*				*
<b>Muscicapidae</b>						
<b>Ficedula parva</b>	Red-breasted flycatcher		*			*
<i>Ficedula albicollis</i>	Collared flycatcher		*			*
<i>Ficedula</i> spp.	Flycatcher	*				*
<b>Muscicapa striata</b>	Spotted flycatcher	*				*
<b>Timaliidae</b>						
<b>Panurus biarmicus</b>	Bearded tit	*				*
<b>Paridae</b>						
<b>Aegithalos caudatus</b>	Longtailed tit	*				*
<i>Parus</i> spp.	Tit	*				*
<b>Sittidae</b>						
<b>Sitta europea</b>	Nuthatch	*				*
<b>Tichodromadidae</b>						
<b>Tichodroma muraria</b>	Wallcreeper	*				*
<b>Certhiidae</b>						
<i>Certhia</i> spp.	Treecreeper	*				*

<b>Remizidae</b>							
<b>Remiz pendulinus</b>	Penduline tit		*				*
<b>Oriolidae</b>							
<b>Oriolus oriolus</b>	Golden oriole	*					*
<b>Laniidae</b>							
<b>Lanius collurio</b>	Red-backed shrike		*				*
<i>Lanius minor</i>	Lesser grey shrike		*				*
<i>Lanius excubitor</i>	Great grey shrike		*				*
<i>Lanius</i> spp.	Shrike	*					*
<b>Corvidae</b>							
<b>Garrulus glandarius</b>	Jay			*		*	
<i>Pica pica</i>	Magpie			*			*
<i>Corvus monedula</i>	Jackdaw			*		*	
<i>Corvus frugilegus</i>	Rook					*	
<i>Corvus corone corone</i>	Carrion crow			*		*	
<i>Corvus corone cornix</i>	Hooded crow			*		*	
<i>Corvus corone sardonius</i>				*		*	
<i>Corvus corax</i>	Raven	*			*		*
<i>Nucifraga caryocatactes</i>	Nutcracker	*					*
<b>Sturnidae</b>							
<b>Sturnus vulgaris</b>	Starling			*		*	
<b>Sturnus vulgaris balcanicus</b>	Starling			*		*	
<i>Sturnus roseus</i>	Rose-coloured starling		*				*
<b>Passeridae</b>							
<i>Passer hispaniolensis</i>	Spanish sparrow	*					*
<i>Montifringilla nivalis</i>	Snowfinch	*					*
<b>Emberizidae</b>							
<b>Emberiza hortulana</b>	Ortolan		*				*
<i>Emberiza cia</i>	Rock bunting		*				*
<i>Emberiza</i> spp.	Bunting	*					*
<b>Miliaria calandra</b>	Corn bunting	*					*
<i>Plectrophenax nivalis</i>	Snow bunting	*					*
<i>Calcarius lapponicus</i>	Lapland bunting	*					*
<b>Fringillidae</b>							
<i>Fringilla</i> spp.	Chaffinch	*					*
<b>Serinus serinus</b>	Serin	*					*
<i>Carduelis</i> spp.	Redpoll	*					*
<i>Loxia</i> spp.	Crossbill	*					*
<b>Carpodacus erythrinus</b>	Scarlet rosenfinch	*					*
<i>Pyrrhula pyrrhula</i>	Bullfinch	*					*
<i>Coccothraustes coccothraustes</i>	Hawfinch	*					*
<b>REPTILIA</b>							
<b>TESTUDINATA</b>							
<b>Testudinidae</b>							
<b>Testudo hermanni hermanni</b>	Tortoise	*	*		*		
<i>Testudo graeca iberica</i>	Tortoise	*	*		*		
<b>Emydidae</b>							
<b>Emys orbicularis</b>	Turtle	*	*				
<b>SAURIA</b>							
<b>Lacertidae</b>							
<b>Lacerta agilis</b>		*					
<i>Lacerta praticola</i>		*					
<i>Lacerta trilineata</i>		*					
<i>Lacerta viridis</i>		*					
<i>Podarcis muralis</i>		*					
<i>Podarcis taurica</i>		*					
<i>Eremias arguta deserti</i>		*					

<b>Scincidae</b>							
<b>Ablepharus kitaibelli</b>		*					
<b>OPHIDIA</b>	Snakes						
<b>Colubridae</b>							
<b>Coronella austriaca</b>		*					
<i>Elaphe longissima</i>		*					
<i>Elaphe quatorlineata</i>		*	*				
<i>Natrix tessellata</i>		*					
<b>Viperidae</b>							
<b>Vipera ammodytes</b>		*					
<i>Vipera ursinii renardi</i>		*	*				
<i>Vipera berus</i>		*					
<b>Boidae</b>							
<b>Eryx jaculus</b>		*					
AMPHIBIA							
<b>CAUDATA</b>							
<b>Salamandridae</b>		Newts and salamander					
<b>Triturus cristatus cristatus</b>	Crested newt	*	*				
<i>Triturus cristatus dobrogicus</i>	Danube crested newt		*				
<i>Triturus alpestris alpestris</i>	Alpine newt		*				
• <i>Triturus vulgaris ampelensis</i>	Smooth newt		*				
<b>Salamandra salamandra</b>	Fire salamander	*					
<b>ANURA</b>		Frogs					
<b>Discoglossidae</b>							
<b>Bombina bombina</b>	Fire-bellied toad	*	*				
<i>Bombina variegata</i>	Yellow-bellied toad	*	*				
<b>Hylidae</b>							
<b>Hyla arborea</b>	Tree frog	*	*				
<b>Ranidae</b>							
<b>Rana ridibunda</b>	Marsh frog			*			
<b>Rana dalmatina</b>	Agile frog			*			
<b>Rana temporaria</b>	Common frog			*			
<b>Rana arvalis</b>	Moor frog	*					
<b>Rana esculenta</b>	Edible frog			*			
<b>Pelobatidae</b>							
<b>Pelobates fuscus fuscus</b>	Common spadefoot	*	*				
<i>Pelobates syriacus balcanicus</i>	Eastern spadefoot	*	*				
<b>Bufo</b>							
<b>Bufo viridis viridis</b>	Green toad	*					
<b>Bufo bufo</b>			*				
PISCES							
<b>PETROMYZONIFORMES</b>							
<b>Petromyzonidae</b>							
<i>Eudontomyzon</i> spp.	Lamprey						
<b>Lampetra fluviatilis</b>	Brook-lamprey						
<b>ACIPENSERIFORMES</b>							
<b>Acipenseridae</b>							
• <b>Acipenser sturio</b>	Sturgeon						
<i>Acipenser</i> spp.							
<b>SALMONIFORMES</b>							
<b>Salmonidae</b>							
<b>Thymallus thymallus</b>	Grayling			*			
<i>Hucho hucho</i>	Huchen, Danube salmon		*				
<i>Salmo trutta fario</i>	River trout						
<b>Umbridae</b>							
<b>Umbra krameri</b>	Mud minnow		*				
<b>PERCIFORMES</b>							
<b>Percidae</b>							

<b>Gymnocephalus schraetzer</b>			*				
<i>Gymnocephalus baloni</i>			*				
<i>Romanichthys valsanicola</i>		*	*				
<i>Zingel zingel</i>		*		*			
<i>Stizostedion volgensis</i>		*					
<b>Gobiidae</b>							
<b>Proterorhinus marmoratus</b>	Nosed goby	*					
<b>CYPRINIFORMES</b>							
<b>Cyprinidae</b>							
<b>Aspius aspius</b>	Chrup		*				
<i>Chalcalburnus chalcoides</i>			*				
<i>Gobio albipinnatus</i>			*				
<i>Gobio kessleri</i>	River gudgeon	*	*				
<i>Gobio uranoscopus</i>			*				
<i>Leuciscus souffia</i>	Souffia chub		*				
<i>Rutilus pigus</i>			*				
<i>Rhodeus sericeus amarus</i>	Bitterfish		*				
<i>Barbus</i> spp.	Barbel			*			
<b>Scardinius racovitzai</b>		*					
<b>Cobitidae</b>							
<b>Cobitis elongata</b>	Spotted big loach		*				
<i>Cobitis taenia</i>	Spined loach		*				
<i>Misgurnus fossilis</i>	Mud loach		*				
<i>Sabanejewia aurata</i>	Loach		*				
<b>CLUPEIFORMES</b>							
<b>Clupeidae</b>							
<i>Alosa</i> spp.	Shad		*	*			
<b>SCORPAENIFORMES</b>							
<b>Cottus gobio</b>	Bullhead		*				
<b>ARTHROPODA</b>							
<b>CRUSTACEA</b>							
<b>DECAPODA</b>							
<b>Astacus astacus</b>				*			
◦ <i>Austropotamobius torrentium</i>			*				
<b>INSECTA</b>							
<b>ORTHOPTERA</b>	Grasshoppers, crickets						
<b>Isophya costata</b>		*	*				
<i>Odontopodisma rubripes</i>		*	*				
<i>Paracaloptenus caloptenoides</i>		*	*				
<i>Poecilimon intermedius</i>		*	*				
<i>Stenobothrus eurasius</i>		*	*				
<i>Capraiscola ebneri</i>		*	*				
<i>Podismopsis transsylvanica</i>		*	*				
<i>Uvarovittetix transsylvanica</i>		*	*				
<i>Zubovskya banatica</i>		*	*				
<i>Fulvins oxycarenoides</i>		*	*				
<b>COLEOPTERA</b>	Beetles						
<b>Cerambyx cerdo</b>		*	*				
<i>Lucanus cervus</i>			*				
<i>Osmoderma eremita</i>			*				
<i>Rosalia alpina</i>		*	*				
<i>Carabus hampei</i>		*	*				
<i>Carabus hungaricus</i>		*	*				
<i>Carabus variolosus</i>		*	*				
<i>Herpes porcellus</i>			*				
<i>Probaticus subrugosus</i>		*	*				
<i>Pseudogaurotina excellens</i>		*	*				
<i>Pytho kolwensis</i>		*					

LEPIDOPTERA		Butterflies, moths						
<b>Parnasius apollo</b>			*					
<i>Colias myrmidone</i>			*					
<i>Erannis ankeraria</i>			*	*				
<i>Glyphipterix loricatella</i>			*	*				
<i>Maculinea alcon</i>			*	*				
<i>Catopta thrips</i>			*	*				
<i>Lychaene helle</i>			*	*				
<i>Kirinia roxelana</i>			*	*				
<i>Lepidea morsei</i>			*	*				
<i>Nymphalis vaualbum</i>			*	*				
<i>Pseudophilotes bavius</i>			*	*				
MOLLUSCA								
GASTROPODA		Snails						
<b>Hydromia kovacsi</b>			*	*				
◦ <i>Anisus vorticulus</i>			*	*				
<i>Theodoxus transversalis</i>			*	*				
<i>Alopiä bielzii bielzii</i>			*	*				
<i>Alopiä subcosticollis nordsiecki</i>			*	*				
<i>Alopiä subcosticollis oculata</i>			*	*				
<i>Herilla zieglerti dacica</i>			*	*				
<i>Holandrina holandri</i>			*	*				
<i>Chilostoma banaticum</i>			*					
<i>Helix pomatia</i>					*			
ANNELIDA								
HIRUDINEA		Leech						
<b>Hirudo medicinalis</b>					*			

5. Plant and animal species whose conservation requires the strict protection (EU category)- annex no. 4, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
6. Plant and animal species whose conservation requires designation of special areas conservation and of the special areas of avifaunistic protection (EU category)- annex no. 3, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
7. Species of plants and animals of communitary interest whose harvesting and exploitation needs management measures (EU category)- annex no. 5, Law no. 462/18 Jul 2001 (Regim of natural protected areas, conservation of natural habitats, conservation of wild flora and fauna)
8. Natural Monuments (according to Decree No. 237/1950, supplemented by Council of Ministers Decision No. 518/1954)
9. Hunting permitted during certain seasons in accordance with Law No. 103/23 sept. 1996 and Romanian Hunting Guidelines published annually
10. Hunting strictly prohibited under Romanian Law No. 103/23 sept. 1996
  - Priority species (endangered/endemic) which require special measures for conservation



## C. SPECIES OF BLACK SEA IMPORTANCE

As amended by Bulgaria, Georgia, Romania, Russia and Ukraine

### ALGAE

1. *Cystoseira barbata* \*\*
2. *Cystoseira crinita*\*\*
3. *Dictyota dichotoma* \*
4. *Phyllophora brodiae* \*\*
5. *Phyllophora nervosa* , key species of the *Phyllophora* biocoenosis, commercial species\*\*
6. *Phyllophora pseudoceranoides* \*\*

### PLANTS

7. *Salvinia natans* \*\*
8. *Trapa natans* \*\*
9. *Zostera marina*\*
10. *Zostera noltii*\*

### ANIMALS

#### Spongia

11. *Lissodendoryx variisclera* \*
12. *Suberites prototipus* \*

#### Polychaeta

13. *Eteone siphonodonta*\*
14. *Hesionides arenarius* \*\*
15. *Nainereis laevigata*\*
16. *Ophelia bicornis* \*\*
17. *Phyllodoce nana*\*

#### Crustacea

18. *Anomalocera patersoni* \*\*
19. *Apseudopsis ostroumovi*\*
20. *Biancolina cuniculus*\*\*
21. *Branchinecta orientalis* \*
22. *Branchinectella spinosa* \*\*
23. *Branchinectella media* \*
24. *Callianassa pontica* \*\*
25. *Callianassa truncata* \*\*
26. *Caprella acantifera*\*
27. *Carcinus mediterraneus*\*
28. *Eriphia verrucosa* \*\*
29. *Hemimysis anomala* \*\*
30. *Hemimysis serrata* \*\*
31. *Homarus vulgaris* \*
32. *Iphigenella acanthopoda* \*
33. *Iphigenella andrussovi* \*
34. *Iphigenella shablensis* \*
35. *Katamysis warpachowskyi* \*
36. *Labidocera brunescens* \*\*
37. *Macropipus arcuatus* \*\*
38. *Pilumnus hirtellus* \*\*
39. *Pontella mediterranea* \*\*
40. *Potamon tauricum* \*
41. *Processa pontica* \*

42. *Smirnoviella reducta* \*
43. *Tanymastix stagnalis* \*
44. *Upogebia pusilla* \*\*
45. *Xantho poressa* \*\*

#### Insecta

46. *Calopteryx splendens balcanica* \*\*
47. *Calopteryx splendens taurica* \*\*
48. *Calopteryx virgo meridionalis* \*\*

#### Halacaridae

49. *Halacarellus procerus* \*\*

#### Mollusca

50. *Bela nebula* \*
51. *Cyclope donovani* \*
52. *Donacilla cornea* \*\*
53. *Halichondria panicea*\*
54. *Melaraphe neritoides* \*\*
55. *Ostrea edulis* \*\*
56. *Pachygrapsus marmoratus*\*
57. *Patella tarentina* \*\*
58. *Solen vagina* \*\*

#### Echinodermata

59. *Echinocyamus pusillus* \*
60. *Marthasterias glacialis* \*

#### Acrania

61. *Amphioxus lanceolatum* \*

#### Pisces

62. *Acipenser güldenstädti*\*\*
63. *Acipenser güldenstädti colchicus* V.Marti \*\*
64. *Acipenser nudiventris* \*\*
65. *Acipenser ruthenus* \*\*
66. *Acipenser stellatus*\*\*
67. *Acipenser sturio* \*
68. *Aidablennius sphinx* \*\*
69. *Aphia minuta* \*\*
70. *Balistes carolinensis* \*
71. *Belone belone*\*\*
72. *Callionymus belenus* \*\*
73. *Dicentrarchus labrax*\*\*
74. *Diplodus annularis*\*
75. *Hippocampus guttulatus microstephanus* \*\*
76. *Hucho hucho hucho* \*
77. *Huso huso* \*\*
78. *Knipowitschia longicaudata* \*\*
79. *Lipophrys pavo* \*\*
80. *Liza ramada*\*
81. *Lophius piscatorius* \*
82. *Mezogobius batrachocephalus*\*
83. *Mullus barbatus*\*
84. *Nerophis ophidion*\*

- 85. Pomatomus saltator \*\*
- 86. Pomatoschistus caucasicus\*\*
- 87. Salmo trutta labrax \*\*
- 88. Sarda sarda \*\*
- 89. Scomber scombrus \*\*
- 90. Scorpena porcus
- 91. Serranus cabrilla\*\*
- 92. Serranus scriba\*
- 93. Sphyaena sphyaena \*
- 94. Spicara smaris\*
- 95. Syngnatus Tenuirostris\*
- 96. Syngnatus typhle \*
- 97. Thunnus thynnus \*\*
- 98. Trigla lucerna\*
- 99. Xiphias gladius \*

- 107. Pandion haliaetus \*\*
- 108. Panurus biarmicus\*
- 109. Pelecanus crispus \*\*
- 110. Pelecanus onocrotalus \*\*
- 111. Phalacrocorax aristotellis \*\*
- 112. Haliator (Phalacrocorax) pygmaeus \*
- 113. Phenicopterus rubber \*
- 114. Platalea leucorodia \*\*
- 115. Plegadis falcinellus \*\*
- 116. Puffinus puffinus yelkouan\*
- 117. Recurvirostra avosetta\*
- 118. Branta ruficollis \*\*
- 119. Somateria mollissima \*
- 120. Sturnus roseus \*
- 121. Tadorna ferruginea \*\*

**Aves**

- 100. Asio flammeus\*
- 101. Calonectris diomedea\*\*
  - 102. Ciconia nigra \*\*
  - 103. Gelocheilidon nilotica\*
  - 104. Haliaeetus albicilla \*\*
  - 105. Himantopus himantopus\*
  - 106. Numenius tenuirostris\*

**Mammalia**

- 122. Delphinus delphis \*\*
- 123. Lutra lutra \*
- 124. Monachus monachus \*
- 125. Phocoena phocoena \*\*
- 126. Tursiops truncatus \*\*

**Notes: \* Rare species**  
**\*\* Endangered species**

## ANNEX IX

### THE TREATIES, THE CONVENTIONS AND THE INTERNATIONAL AGREEMENTS

in conformity with the Romanian Constitution this get part of the internal right (internal laws), by ratifying or adherating.

In the field of nature conservation, the following *treaties/conventions/agreements* are in force:

- ❖ ***The Treaty on Antarctica (Washington 1959)***, ratified by Decree 255/1971, is a legal instrument establishing ways the contracting parts can use Antarctica, exclusively for peaceful purposes including measures for protection of flora and fauna. One principle of this treaty ensures the freedom of scientific research in the spirit of international cooperation, including the participation of international organizations.
- ❖ ***The Convention concerning the protection of the world cultural and natural heritage (Paris, 1972)***, accepted by **Decree 187/1990**, while fully respecting the sovereignty of the state on whose territory the cultural and/or natural heritage is situated, as well the property right provided by national legislation, the Parties to this convention recognize that such heritage constitutes world heritage, for whose protection it is the duty of the international community as a whole to cooperate.  
On the "World Heritage List", Romania was put down with approximately 75% of the Danube Delta (360.000 ha).
- ❖ ***The Convention on wetlands of international importance especially as waterfowl habitat (Ramsar, 1971)***, ratified by **Law 5/1999**. The purpose of this convention is to designate, by the Contracting Parties, wetlands of international significance in terms of ecology, botany, zoology, limnology or hydrology, and ensuring appropriate conservation of these areas. The Danube Delta was declared Ramsar Site.
- ❖ ***The Convention on the conservation of European wildlife and natural heritage (Bern, 1979)***, accepted by Romania by **Law 13/1993**. The purpose of this convention is to ensure the conservation of wild flora and fauna and their natural habitats, in particular those species and habitats whose requires the cooperation of several nations.
- ❖ ***Convention on biological diversity (Rio de Janeiro, 1994)*** ratified by **Law 58/1994**. The objectives of this convention are the conservation of biological diversity and the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, especially by appropriate access to these resources and by appropriate transfer of relevant technologies.  
The main measures set out for bio-diversity conservation and sustainable use of its components are the development of new national strategies, plans or programs or the adaptation of existing strategies, plans or programs, as well to integrate as far as possible and appropriate the conservation and sustainable use for biodiversity conservation into relevant sector or cross-sector plans, programs or policies.
- ❖ ***The Convention on international trade in endangered species of flora and fauna (Washington, 1973)***, accepted by Romania by **Law 69/1994**, ensures the protection of endangered species by regulating their trade.
- ❖ ***The Convention on conservation of migratory species of wild animals (Bonn, 1979)***, ratified by **Law 13/1998**, is a universal instrument, developed following Recommendation 32 from the Action Plan elaborated by the Stockholm Conference. This convention recognizes that the conservation of migratory species requires both international cooperation as well as actions within each national territory in relation to migration routes, including wintering, staging, feeding, breeding and moulting areas.
  - ❖ ***The Agreement on the conservation of African-Eurasian migratory waterbirds (Hague, 1995)***, ratified by **Law 89/2000**, aims to coordinate measures to maintain migratory waterfowl in a favorable conservation status, or to restore them to such a status.
  - ❖ ***The Agreement on the conservation of bats in Europe (London, 1991)***, accepted by **Law 90/2000**, is the first international agreement devoted to the conservation of bats and the first of its kind under Art. IV of the Bonn Convention.
  - ❖ ***The Agreement on the conservation of cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area***, ratified by **Law 91/2000**, to identify and reduce threats to cetaceans, and to improve general knowledge of these animals.

## ANNEX X

### EU LEGISLATION FOR NATURE CONSERVATION

The EU legislation are based the **European Communities Treaty** which established the main principles concerning the environmental policies. In addition of this treaty are in force three mandated forms of European Union: directives, regulations and decisions.

- In the field of nature conservation, are in force the following **Directives**:

- ❖ **Directive 92/43/CEE on the conservation of the natural habitats and wild flora and fauna** aims maintains or rehabilitation the favorable conservation status of the European biological diversity through specifically measures, taking into account the economic, social and cultural conditions of the member states.

To this end will be established a ecological network of "Special Areas for Conservation", at European level, known as *Nature 2000*, including the sites within are integrate natural habitats tips or wild species of community interest and which request the special measures for their conservation. All sites protected under the Directive 79/406/EEC are also included in the *Nature 2000* ecological network.

Land use planning should take into account and integrate the appropriate management plans for this sites to ensure the ecological coherence of the *Nature 2000* network, especially those which enable species migration, propagation and genetic exchange.

This directive is elaborate based of the annexes which establish the natural habitats tips and wild flora and fauna species of Community interest and their conservation request in this end to draw up the special areas (Annexes I and II), the criteria for identify the sites of Community interest (Annex III), the flora and fauna species which request the strict protection (Annex IV), as well as the species which are subject of special management measures (Annex V).

Implementation considerations:

- Assessment of the biological diversity status and designate the sites than can be subject to the special management, with a view to ensure their favorable conservation status;
- An appropriate assessment of any plan or project likely to have a adversely effect the integrity of the sites concerned and, in the absence of alternative solutions, to ensure the compensatory measures necessary;
- Establishment the management plans, including the monitoring system, designating the responsible authorities with enforcement, as well as appropriate sanctions will be apply for violation of the legal provisions.

- ❖ **Directive 79/409/EEC on the conservation of wild birds**, as well as **Directive 85/411/EEC amending Directive 79/409/EEC on the conservation of wild birds**, **Directive 91/244/EEC amending Directive 79/409/EEC on the conservation of wild birds**, **Directive 94/24/EEC amending the Annex II of Directive 79/409/EEC on the conservation of wild birds**, **Directive 97/49/EC amending Directive 79/409/EEC on the conservation of wild birds** aimed the conservation of wild birds. For maintain the population of all species of natural occurring birds in the wild state at a level that corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements.

In this end are promoting the special conservation measures, including preservation, maintaining, and rehabilitation of the habitats occurring these species, by designed the Special Protection Areas (SPA) included in the *Nature 2000* network. Special mention is given to wetlands in this regard.

Implementation considerations:

- Encourage research and any work required as a basis for the protection, management and use of the population of wild bird species and designate the Special Protection Areas to ensure their favorable conservation status;
- Establishment the management plans, including the monitoring system, designating the responsible authorities with enforcement, as well as appropriate sanctions will be apply for violation of the legal provisions.

- ❖ **Directive 83/129/EEC concerning the importation into Member States of skins of certain seal pups and products derived therefrom** and **Directive 89/370/EEC amending Directive 83/129/EEC concerning the importation into Member States of skins of certain seal pups and products derived therefrom** aimed prohibit commercial import of certain seal products, excepted the products resulting from traditional hunting by the Inuit people.

Implementation considerations:

- Establishment of certification procedures for imports of allowed seal pup products and inspection and enforcement procedures for the control of prohibited products;
- Establishment the coordination and consultation procedures between the responsible authorities (Environment, Customs, Police).

- In the field of nature conservation, are in force the following **Regulations**:

- ❖ **Regulation 3943/90/EC on the protection of the Antarctic** adopts the observation and inspection procedures called for under the Convention.
- ❖ **Regulation 348/81/EEC on common rules for imports of whales or other cetacean products** established the procedure to issue the import licenses for import of whales or other cetacean products, used for commercial purposes.
- ❖ **Regulation 3254/91/EEC prohibiting the use of leghold traps in the Community and the introduction into the Community of pelts and manufactured goods of certain wild animal species originating in countries which catch them by means of leghold traps or trapping methods which do not meet international humane trapping standards** and **Regulation 35/97/EEC laying down provisions on the certification of pelts and goods covered by Council Regulation 3254/91/EEC** prohibited the trade (import, export, re-export) with pelts or other goods (listed in Annex II) from certain wild species listed in Annex I and catch by means of leghold traps or trapping methods which do not meet international humane trapping standards.
- ❖ **Regulation 338/97/EEC on the protection of species of wild flora and fauna by regulating trade therein**, as well as **Regulation 938/97/EEC amending Regulation 338/97/EEC on the protection of species of wild flora and fauna by regulating trade therein**, **Regulation 2307/97/EEC amending Regulation 338/97/EEC on the protection of species of wild flora and fauna by regulating trade therein**, **Regulation 2214/98/EEC amending Regulation 338/97/EEC on the protection of species of wild flora and fauna by regulating trade therein**, **Regulation 939/97/EEC laying down detailed rules concerning the implementation of Council Regulation 338/97/EEC on the protection of species of wild flora and fauna by regulating trade therein**, **Regulation 767/98/EEC amending Regulation 939/97/EEC**, **Regulation 1006/98/EEC amending Regulation 939/97/EEC** aiming to protect wild flora and fauna species which are or may be affected by uncontrolled trade, through protection, regulation or monitoring.  
This Regulation is elaborate based of the annexes which show the flora and fauna species which request conservation through limited their trade.

Implementation considerations:

- Designation of competent authorities (scientific and management) responsible to issue the permits and certificates requested for trade (import, export, re-export) with wild species and their specimens. Customs offices must be given the additional responsibility of conducting checks as well as dealing with the issuance of import and export permits;
  - Establishment and/or develop import and export permit procedures authorization and documentation;
  - Establishment and/or develop monitoring procedures of trade with their species;
  - Enforcement procedures including prosecution for unauthorized trade in species.
- In the field of nature conservation, are in force the following **Decisions**:
  - ❖ **Decision concerning a site information format for proposed Natura 2000 sites;**
  - ❖ **Decision 82/72/EEC on the conclusion of the Convention on the conservation of European wildlife and natural habitats;**
  - ❖ **Decision 82/461/EEC on the conclusion of the Convention on the conservation of migratory species of wild animals;**
  - ❖ Decision 1/98/EEC concerning the association between the European Community and their member states, of one part, and Romania, of other parts, in the view of participation at the LIFE Program of European Community.

ANNEX XI  
ROMANIAN ENVIRONMENTAL PROTECTION LAW

THE OFFICIAL GAZETTE  
OF  
ROMANIA

Year VII - Nr. 304

PART I

Saturday, 30 December 1995

**LAWS, DECREES, DECISIONS AND OTHER ACTS**

**SUMMARY**

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**LAWS AND DECREES**

**ROMANIAN PARLIAMENT**

**DEPUTY CHAMBER**

**SENATE**

**ENVIRONMENTAL PROTECTION LAW  
LAW 137/30. XII. 1995**

**Romanian Parliament** adopts the present law:

**CHAPTER I**

**General Principles and dispositions**

Art. 1. - The object of the present law is the regulation of the environment protection, objective of major public interest, based on the strategic principles and elements which lead to the sustainable development of the society.

Art. 2. - The definitions in this law are presented in annex 1, integral part of the present law.

Art. 3. - The strategic elements and principles which represents the base of this law, with the aim to ensure the sustainable development are:

- a) the precautions in decision-making principle;
- b) the prevention of the environmental risk and damage production principle;
- c) conservation of biodiversity and of the specific ecosystems for the natural biogeographic frame principle;
- d) the "polluter pays" principle;
- e) the priority removal of the pollutants which threaten the human health;
- f) the development of the national environment integrated monitoring system;
- g) sustainable use;
- h) maintenance, improvement of the environment quality and the reconstruction of the deteriorated areas;
- i) creation of a frame to ensure public participation of the non-governmental organizations and populations to the decisions elaboration and implementation;
- j) the development of international collaboration to ensure the environment quality.

Art. 4. - The implementation modalities for the strategic principles and elements are:

- a) to adopt the environmental policies, harmonized with the development programs;
- b) to enforce the obligativity character of the environmental impact assessment in the initial phase of the projects, programs or activities;
- c) to correlate the environmental planning with the territorial planning and urbanism;
- d) to introduce the economic instruments as incentives or as means of coercion;
- e) to solve, on competency levels, the environmental problems, according to their degree;
- f) to elaborate norms and standards harmonized with the international programs and to introduce the compliance schedules;
- g) to promote the basic and applicative research in the environment protection field;
- h) to train and educate the population, as well NGOs participation at the decision-making process;

Art. 5. - The State recognizes the right to a healthy environment for all persons, granted within this aim:

- a) the access at the environmental information;
- b) the right to associate in organizations to defend the environmental quality;
- c) the right to be advised in the decision-making process concerning the development of the policies, legislation and environmental norms, the environmental permits issuing process, including for the territorial planning and urbanism;
- d) the right to address directly or through associations, to the administrative or court authorities with the aim of prevention, or in case of direct or indirect prejudice production;
- e) the right to be compensated following a prejudice.

Art. 6 - The environment protection is an obligativity for the central and local public administration authorities, as well as for all individuals or public entities;

Art. 7 - The responsibility concerning the environment protection falls under the central authority for the environment protection and its territorial agencies.

## CHAPTER II

### **The regulation of the economic and social activities with impact upon the environment**

#### *Section 1*

#### **Permit procedure**

Art. 8. - The environment protection authorities lead the permit procedure and issue environmental permits and authorizations according to article 11.

The request for an environmental permit is compulsory for new investments, the change of the existent ones and for the activities foreseen in the annex II of the present law.

The request for an authorization is compulsory when new objectives are put in function which have the environment permit and in one year interval from the enforcement of the present law, for the existent activities.

The activities which do not involve construction-assembling works require only environment authorization, excepting those provided for at point 8. g) and i) from annex II of the present law.

The environment permit and/or authorization is issued only after all the required visas are obtained, according to the law.

Art. 9 - The central authority for the environment protection elaborates the specific authorization procedure for the economic and social activities, the frame-model for the report of the environmental impact assessment and the competent level to issue the environmental permit and/or according to case the authorization, in 60 days interval from the enforcement of the present law.

The environmental permit and authorization validity is of max. 5 years.

The environmental permit and authorization are not issued for cases in which no variant of compliance project or program foresees the elimination of the negative effects upon the environment, reported at the enforce standards and regulations.

Art. 10. - The environmental permit or authorization can be reanalyzed, if new elements appear, unknown at the issuing date, and in the case of renewal, when the remaking of the report concerning the EIA can be requested.

The environmental permit or authorization is suspended for non-compliance with the mentioned provisions, after a previous summon, with deadline and is maintained until the elimination of the causes responsible for the suspension, but no more than 6 months.

Environmental protection authorities dispose , after the deadline expires, the stopping of the project execution or activity ceasing.

For the existent activities which don't meet the authorization conditions, the environment protection authority dispose the requirement for the environmental audit and establish the compliance schedule in agreement with the holder. After

each deadline expires, in non-compliance case, the environment protection competent authority dispose the respective activity ceasing. The ceasing disposition is executory.

The litigation generated by the issuing or suspension of the environment permit or authorization are to be solved according to the Law of the administrative disputed claims office.

Art. 11 - The environmental impact assessment procedure is made of the following phases: preliminary, itself and the analysis and validation.

The environment protection authority organize and decide the implementation of the procedure's phases, as follow:

- a) the request with the project description, addressed in writing to the authority for the environment protection by the holder of the project or of the activity;
- b) the proposed activity frames within the activities types subject or not to the EIA; if additional information are required, a preliminary study can be requested from the holder;
- c) the analysis of the proposed activity aim, with the participation of the environmental protection authority, of the holder, of experts and representatives of the local public administration, who may be affected by the environmental changes caused by the implementation of the respective activities;
- d) preparation by the environmental protection authority of the guidelines with the resulted problems based on the analyses according to the letter c) and which have to be followed within the EIA report; the notification of the holder, together with the list of all the required notes;
- e) presentation by the project or activity holder of the EIA report, taking into account all the alternatives, including that of renouncing at the proposed activities;
- f) the preliminary analyses of the report by the environmental protection authority and the acceptance or motivated disposal of its restoration.
- g) the notification and public hearing of the report; registering of the observations and of the resulted conclusions;
- h) the final decision of the environmental protection authority made public and motivated based on the aspects observed at let. f) and g);
- i) issuing or motivated rejection of the environmental permit or authorization in 30 days maximum from the final decision.

Art. 12 - The authorization procedure is public. The project and activities mediatization, for which the permit or authorization and EIA studies are requested, as well as public hearings is ensured by the environmental protection authority.

The impact studies are accomplished by the specialized units, attested individuals or legal entities, the costs being supported by the project or activity holder, also when the study remaking or taking again is requested.

The responsibility for the accuracy of the information delivered concerning the proposed action is due to the owner, and for the accuracy of the EIA report, to the executing body.

Art. 13 - The environmental protection authorities cash in the amounts from the taxes for issuing the environmental permits or authorization.

The level of the taxes is established at the proposal of the environmental protection central authority by Government Decision.

Art. 14. - By the change of investment destination or of the owner, as well as by the ceasing of the activities with environment impact, the environmental audit is compulsory to be done by the former owner, with the aim of establishment the obligations concerning the environmental quality restoration within the impact area of the respective activity.

The competent authority for the environment protection revises the environmental audit, establishes the compliance schedule, and the former owner negotiate with the new one the assuming of previous obligations and the compensations which will be award by the application of the protection and ecological reconstruction measures application.

## Section 2

### ***The regime of the hazardous substances and waste, as well as other waste***

Art. 15 - The activities subject to a special management regime are concerned with the production, trade and utilization of the hazardous substances and transport, transit, temporary or definite disposal, destruction, manipulation, as well as the import and export of hazardous substances and waste.

Art. 16. - The import in Romania of any kind of waste, as raw or processed status, is forbidden, except for some waste categories, which represents secondary resources of useful raw materials, according to the regulations provided for in norms proposed by the environmental protection central authority and approved by the Government.

The transit and transport of waste of any kind can be accomplished according to the agreements and conventions at which Romania is a Contracting Party.

Art. 17 - The activities foreseen in the Art. 15 and 16 are allowed only based on the environmental permit and/or authorization.

Art. 18 - The environmental protection central authority and its agencies, according to case, supervise and control the observance of the regulations concerning hazardous substances and waste.

Art. 19. - The local authorities are obliged to take measures of prevention and limitation of the environmental impact exerted by any kind of waste and substances and to notify the environmental territorial authorities upon any activity which infringe the legal provisions.

Art. 20. - The custom authorities control and respond of the application of the provisions of art. 17 referring to the entrance and exit in and from the country of the hazardous chemicals and waste, based on the regulations of the environmental protection authorities.

Art. 21. - The individuals and legal entities have the following responsibilities in the field:

- a) to keep the strict evidence - the quantity, characteristics, means of assurance - of the hazardous substances and waste, including their recipients and cans which are in their activity field and to supply monthly the competent environmental protection authorities the required data;

- b) to give the environmental permit and/or authorization and to apply the legal regulations concerning the hazardous substances and waste;
- c) to ensure, by their own systems, the environment supervision, based on the provisions from the authorization, for the risk identification and prevention, to keep notes of the results and to announce the imminence or the production of some unforeseen discharges or accidents to the environmental protection and defense against catastrophes competent authorities.

Art. 22. - The environmental protection central authority elaborates, in 90 days from the enforcement of this law, the regulations concerning:

- a) the disposal, arrangements and supervision of different types of deposits;
- b) the waste collection, processing, treatment, neutralization, as well as the recycling of the used ones;
- c) waste transport;
- d) restoration of the natural frame affected;
- e) the installations for industrial, domestic, agricultural and other waste burning;
- f) the installations for used waters and silts cleaning;
- g) the silt use, of the used waters and the industrial, domestic waste and those resulted from the burning process;
- h) the authorization procedure for the location and arrangements of the deposits, transport, burning, processing and utilization of any kind of wastes;
- i) the import, export and transit of hazardous waste and substances.

Art. 23. - The waste management control is under the environmental protection authorities and other competent authorities, according to the law.

Art. 24. - The local public administration authorities, individuals and legal entities, with activities included within article 22, have the following responsibilities:

- a) to request the environmental permit and/or authorization, according to art. 22, let. h);
- b) to deposit the domestic, industrial, agricultural or other waste only on surfaces authorized in this aim;
- c) to use, in the waste burning case, only installations homologated by the environmental protection and health authorities;
- d) to arrange, according to the competency legally established, the waste disposal facilities;
- e) to respect the natural frame restoration conditions in the waste disposal places provided for in the environmental permit and/or authorization and to guarantee, with financial means, for this;
- f) to recover the reusable waste and to turn them to value through the specialized units;
- g) to use on the agricultural lands only the waste authorized by the competent environmental protection, health and agriculture authorities;
- h) to deposit underground the waste, only when they have the environmental permit and/or authorization for it.

## Section 3

### ***The regime of chemical fertilizers and pesticides***

Art. 25. - Chemical fertilizers, pesticides and other products used in the phyto-sanitary, human-sanitary and veterinary control, shall be produced only through authorized technologies and bio-technologies.



The products shall have by delivery the technical norms for use authorized, in the legal conditions.

Art. 26. - The competent ministries, with the note from the environmental protection central authority have the following responsibilities:

- a) to regulate the phyto-sanitary products regime and of other pesticides to be used in the human-sanitary and veterinary control;
- b) to organize, at the territorial level, the laboratory network for the analysis and the control of the chemical fertilizers and pesticides, as well as the pesticides concentration in soil, crops, fodder, agroalimentary products, either vegetal or animal;
- c) to make the list with the chemical fertilizers and pesticides from Romania and abroad, as well as the maximum admissible limits for the pesticides concentrations, according to the international standards.

The chemical fertilizers and pesticides list shall be drawn up in 30 days from the enforcement of the present law and shall be annually up-dated.

Art. 27. - The environmental protection central authority together with the authorities responsible for the agriculture, silviculture, health and their decentralized services within the territorial units, by case, shall supervise and control the implementation modality for the regulations concerning chemical fertilizers and pesticides.

Art. 28. - The individuals and legal entities which produce, trade and/or use the chemical fertilizers and pesticides have the following responsibilities:

- a) to request the environmental permit and/or authorization for their production;
- b) to deliver, to manipulate, to transport and to trade the chemical fertilizers and pesticides, wrapped with identification tags, warning, safety and utilization prescriptions, under so circumstances, as to avoid the transport means and environmental contamination;
- c) to deposit chemical fertilizers and pesticides only wrapped and in protected places;
- d) to not use chemical fertilizers and pesticides in the areas or on the surfaces where special protection measures are in force;
- e) to spread the pesticides by plane only if they have the permit from the environmental protection agencies, the health units and from the county commissions on melliferous and pastoral bee-keeping, according to the enforce regulations;
- f) to apply, in the blooming period of the flowers, which pollination is made by insects, only those treatments with pesticides selective against the pollination insects;
- g) to not use dangerous baits, except the special authorized cases.

#### **Section 4**

#### ***The regime concerning the protection against the ionizing radiation and of the radiation sources safety.***

Art. 29. - The protection regime for the population, environment and goods against ionizing radiation exposure and ensuring the radiation source safety shall be accomplished through the application of different procedures and equipment for the maintenance of doses and risks at the lowest rational level, within the admissible limits and with the aim to prevent accidents, limited and removal of their consequences.

Art. 30. - The activities in the nuclear field requires the ensuring of the protection and safety measures and shall

develop only based on the environmental permit and authorization, issued according to article 8.

The environmental permit and authorization concerning the installations with major nuclear risk - nuclear-electric units, reactors for research, plants for fabrication of nuclear fuel and final deposits of burned nuclear fuel - shall be issue by the Government.

Art. 31. - The competent authority in the nuclear field shall issue the technical norms, standards and application regulation concerning:

- a) the protection of the population and environment within nuclear risk areas;
- b) physical protection of the nuclear materials and installations;
- c) intervention levels and plans related to transboundary events;
- d) radioactive substances transport;
- e) specific authorization procedures.

The authorization procedure for the major nuclear risk shall be issued in 60 days from the enforcement of the present law.

Art. 32. - The nuclear activities control shall be made by the central authority for the environment protection and by other competent authority according to the law.

The environment protection central authority has the following responsibilities:

- a) to organize the environment radioactivity monitoring on the whole country territory;
- b) to supervise, control and take the measures for the observance of the legal provisions concerning environment radioprotection;
- c) to collaborate with the competent bodies for the defense against catastrophes.

Art. 33. - The individuals and legal entities with activities in the nuclear field shall have the following responsibilities:

- a) to respect the radioprotection and safety norms;
- b) to evaluate directly, indirectly or by authorized fora, the potential risk, to undertake the environmental audit for the existent activities and to request environmental authorization.
- c) to apply the procedures and to foresee the equipment for new activities, in order to reach the lowest rational level of the doses and risks for the population and environment and to request environmental permit and authorization;
- d) to keep the notes of the ionizing radiation sources and to ensure their physical protection;
- e) to apply, through own systems, programs for continuous supervision of the environment radioactive contamination and for the assessment of the critical groups exposure - the population within supervision area - which have to ensure that the conditions provided for in the authorizations are not infringed, by radioactive substances discharges and that the doses shall be maintained in the admissible limits;
- f) to maintain in functioning state the local environment monitoring capacity in order to find any significant radioactive contamination, resulted from an accidental discharge of radioactive substances;
- g) to register the results of the supervision and estimated doses for critical groups;
- h) to report, on established intervals, the results of the registering to the competent authorities;
- i) to report promptly to the competent authority any significant increase of the environment contamination and if that is due or not to the respective activity;

- j) to continuously verify the accuracy of the assumptions made through probabilistic evaluations concerning the radiological consequences of the radioactive emissions.

### CHAPTER III

#### **Natural resource protection and biodiversity conservation**

Art. 34. - The environment protection central authority, consulting the specialized central authorities responsible for the natural resources management, elaborates, based on the present law, the technical regulations concerning the ecosystems protection measures, biodiversity conservation, sustainable management of the natural resources and human health.

At the designing phase of the works able to modify the natural frame of an area the environmental impact assessment procedure is compulsory, followed by the elaboration of the technical solutions to maintain the natural habitat zones, to conserve the ecosystems' functions and to safeguard the vegetal and animal organisms, including the migratory ones, respecting the alternative and the imposed conditions through the environmental permit and/or authorization, as well as the self-monitoring until their accomplishment.

Terrestrial and aquatic surfaces subject to conservation regime as natural habitats or for ecological restoration are managed by the legal holders only if they engage to apply the conservation measures established by the environment protection central authority.

The holders, with any title, who apply these measures, are tax-exempt; the private holders shall be compensated, according to the value of the restoration works done.

Protection of rare threatened species and organisms, biodiversity conservation and the declaration of protected areas, as well as the measures established by the environmental protection authorities are priority in respect with other interests.

The environmental protection central authority, by consultation with the Romanian Academy and with the UNESCO National Commission, shall establish the criteria for the establishment of protected areas and biodiversity conservation.

#### *Section 1*

##### **Protection of water and aquatic ecosystems**

Art. 35. - Protection of the surface and ground waters as well as of the aquatic ecosystems has as aim the maintenance and improvement of their quality and natural productivity, in order to avoid the negative effects upon the environment, human health and material goods.

Art. 36. - The environmental protection central authority, elaborates, in 60 days from the enforcement of this law, the regulations concerning:

- a) technical norms referring to water and aquatic ecosystems protection, including human population in the case of accidental pollution and in transboundary context;
- b) the authorization procedure for the water sources and aquatic ecosystems exploitation, hydrotechnical works for the embankment works and water courses regulation, for irrigation and drainage;
- c) the emissions standards;

- d) the water quality standards;
- e) the requirements for evacuation, used water cleaning and limitation of the effluents evacuation into water.

Art. 37. - The control of the observance concerning the water and aquatic ecosystems protection is organized and exerted by the environment, water, health and other authorities, according to the legal competence.

Art. 38. - The environment protection authorities, the water management authorities, together with the navigation authorities supervise and control the observance of the provisions and apply the legal measures for water protection, as a consequence of the navigation activities, respecting the international conventions in the field, at which Romania is a Contracting Party.

Art. 39. - The individuals and legal entities have the following responsibilities:

- a) to request the environment permit and/or authorization for the activities provided for in annex II at the present law. The wells drilled at depth to 50 m for the satisfaction of the individual household requirements are excepted from the authorization;
- b) to respect the water emission and quality standards, the permit and authorisation provisions and to put at the authorized laboratories disposal, at the established deadlines, the water samples for analysis;
- c) to not throw and deposit on shores, river beds and wetlands, any kind of waste and to not introduce in these explosives, tension voltage, narcotics or other dangerous substances;
- d) to not wash in the natural waters cars, equipment and packages with oil, liquid fuels, lubricants, dangerous substances or pesticides content;
- e) to execute all the restoration works of the natural resources, to ensure the aquatic fauna migration and improvement the water quality, activities provided for with deadline in the environmental permit and authorization and to monitor the impact area;
- f) to equip, in the case of ownership of ship, nautic platforms and marine drills, with waste storage or treatment installations, used water cleaning installations and links for their discharges in shore or floating installations;
- g) to arrange the harbors with installation for collecting, processing, recycling or neutralization of the oil, domestic or other nature waste, stored on fluvial and marine ship and make watch teams in case of accidentally pollution of the coast areas and waters;
- h) to not evacuate used waters from ship or floating platform in natural waters and to not throw any kind of waste.

#### *Section 2*

##### **Air protection**

Art. 40. - By atmosphere protection the prevention, reduction of the deterioration and the improvement of its quality is followed, in order to avoid the manifestation of some negative effects upon the environment, human health and material goods.

Art. 41. - The environmental protection central authority promotes the regional and global policies, substantiates the specific principles and actions, both at national and local level, concerning the atmosphere protection.

The national policy for atmosphere protection is made up of the following:

- a) the introduction of adequate technics and technologies for the source retention of pollutants;

- b) air resource management, with the aim to reduce the pollutants emissions to accomplish the lowest levels which do not exceed the regeneration capacity of the atmosphere;
- c) the air resource regeneration, in order to ensure the adequate quality for the safety of the human health;
- d) the modernization and improvement of the national air quality monitoring system.

Art. 42. - The environmental protection central authority by consultation with the competent ministries shall elaborate the technical norms, standards and application regulations concerning:

- a) air quality according to the air pollutants;
- b) air pollutants emissions for fixed and non-fixed sources, as well as restriction conditions or forbidden conditions for the use, including for the substances affecting ozone layer;
- c) the fuel and carburants quality, as well as the regulations concerning sell-buy process and transport;
- d) the sound threshold and regulations for noise restriction;
- e) air quality supervision, sampling and analysis procedures, points and instruments location for the sampling and analysis, the measurements frequency and others;
- f) the identification, supervision and control of the economic agents with activity generating potential risk and/or air pollution;
- g) the fast notification system, in acute atmosphere pollution case with transboundary effects, to the designed authorities for the application of the Convention concerning the transboundary effects of the industrial accidents.

The technical norms, application regulations, respective the standards, shall be elaborated in one year, respective two years interval from the date of this law enforcement.

Art. 43. - The environmental protection central authority supervises and controls the implementation of the legal provisions concerning air protection, in regard to which:

- a) observes the apparitions of air pollution events, alerts and/or issues prognosis related to this;
- b) take measures for the temporary or definitive ceasing of the activities responsible for pollution in order to apply some emergency measures or for non-observance of the compliance schedule;
- c) request technological measures, apply restrictions and interdictions in order to prevent, reduce or eliminate the pollutants emissions;
- d) apply the penalties provided by law in case of non-observance of the measures.

Art. 44. - The legal land owners and holders are obliged to maintain and extend the protection curtains, the green spaces, parks, green fences for improvement of the air regeneration capacity, sound protection and wind protection.

Art. 45. - The custom authorities shall have the responsibility to forbid the entrance/exit from the country of the mobile pollution sources, which do not observe the competent authorities dispositions, according to the law.

Art. 46. - The individuals, legal entities shall have the following responsibilities in the field:

- a) to observe the regulations concerning the air protection, by taking the adequate technical measures for retention and neutralization of the air pollutants;
- b) to equip the technological installations, sources of pollution, with measure systems, to ensure their accurate functioning, to ensure qualified staff and to supply, by

- request or according to the compliance schedule, to the environmental protection authorities, the required data;
- c) to improve the technological performances with the aim of emission reduction and to not put into exploitation the installations which exceed the maximum admissible limits;
- d) to ensure, at the environmental protection authorities request the reduction, change or ceasing of the pollution generating activity;
- e) to ensure special measures and equipment for sound isolation and protection of the noise and vibration generating sources, to verify their efficiency and to put in exploitation only those which do not exceed the admissible sound threshold.

### Section 3

#### **Protection of soil, subsoil and terrestrial ecosystems**

Art. 47. - Soil, subsoil and terrestrial ecosystems protection, by adequate measures of management, conservation, organization and land planning is compulsory for all holders, indifferent of title.

Art. 48. - The environmental protection central authority, by consultation with the competent ministries establishes:

- a) soil quality monitoring system with the aim to know the actual stage and evolution trends;
- b) the regulations concerning soil, subsoil and terrestrial ecosystems quality protection and biodiversity conservation;
- c) the authorization procedure concerning the environment protection problems, included in the land planning, arranging of streams for the silvicultural arrangements, soil erosion control, study drills and geological and hydrogeological prospecting, as well as for mineral extraction activities;
- d) the regulations concerning the natural frame restoration in areas where soil, subsoil and the terrestrial ecosystems have been affected by natural phenomena or activities with negative impact upon the environment.

Art. 49. - The central authorities for agriculture and silviculture shall have the following responsibilities:

- a) to elaborate the regulations concerning the agricultural systems, plants crops and livestock technologies, forests regeneration, timber harvesting, collection and transport and soil quality standards, with the aim to maintain and improve them, to eliminate the negative effects upon the terrestrial and aquatic ecosystems and to ensure the conservation of the specific functions, biodiversity and natural habitats and to communicate them to the environmental protection central authority;
- b) to keep record of the affected lands for the agriculture and to offer, at owners request, specialized technical assistance for the improvement or change of land use;
- c) to direct and exert the specialized technical control for the land reclamation and agro-pedo-improvement works;
- d) to direct and to offer technical assistance, at the request of land farmers, concerning the most adequate technics and technologies for soil management and improvement.

Art. 50. - The control over the legal regulations observance concerning the protection and conservation, improvement and adequate use of soils, subsoil and terrestrial ecosystems shall be organized and exerted by the environmental protection authorities, as well as, according to case, by other competent public administration authorities, according to the legal provisions.

Art. 51. - Land holders, indifferent of titles, with the aim to ensure the soil quality protection, have the following responsibilities:

- a) to prevent, based on the regulations in the field, the soil quality deterioration;
- b) to ensure at the location, designing, building and functioning of any kind of objectives, as well as at the land use change. the conditions provided for in the environmental permit and authorization;
- c) to not burn the stubbles, reeds, shrubs or herbaceous vegetation without authorization from the environmental protection competent authority.

Art. 52. - The holders with any title, of the forests, forestry vegetation outside the forest fund and pastures have the following responsibilities:

- a) to maintain the afforested surface of the forest vegetation outside the forestry fund, including dwarf-pines, shrubs and existent pastures, being forbidden their reduction, except for the cases provided legally for;
- b) to exploit the timber only within the forest capacity limits, established by the silvicultural arrangements and approved by law;
- c) to ensure the observance of the silvicultural regulations for exploitation and technological transport of the timber, established according to the law, with the aim to maintain forests biodiversity and ecological balance;
- d) to observe the silvicultural regime for the afforestation of the exploited surfaces, established by silvicultural central authority, in agreement with the forest sustainable use conditions provided for by the environmental protection central authority;
- e) to ensure the application of the special conservation measures for the forests with special functions of protection, located on higher slopes lands, with sliding and erosion processes, on debris, rocks, at the upper altitudinal limit of the forestry vegetation, as well as other similar forests;
- f) to observe the silvicultural regime established for the wood vegetation conservation from afforested pastures with protection functions for soil and water resources;
- g) to ensure the wise exploitation, organization and arrangements of pastures, according to their restoration capacity;
- h) to exploit the forests resources, the game and fishery fund, within the regeneration potential limits, according to the legal provisions;
- i) to notify the environmental protection authorities upon accidents or activities affecting the forest ecosystems or other similar terrestrial ecosystems.

Art. 53. - The individuals and legal entities, which prospect or exploit the subsoil resources, have the following responsibilities:

- a) to request environmental permit and/or authorization according to law and to respect their provisions;
- b) to restore the affected lands, up to the natural productivity and ecological parameters or to a new functional ecosystems, according to the provisions and deadlines from the environmental permit and/or authorization, guaranteeing the financial means for this and monitoring the area;
- c) to notify the environmental protection authorities or other competent ones, according to law, upon any accidental events, which endanger the terrestrial ecosystem and to undertake action for its restoration.

#### *Section 4*

#### ***The regime of protected areas and natural monuments***

Art. 54. - For the conservation of the natural habitats, of the biodiversity which defines the bio-geographical frame of the country, as well as the natural structures and formations with ecological, scientific and landscape values, the national network of protected areas and natural monuments shall be maintained and developed.

Protected areas and natural monuments shall be declared through acts or regulations with normative feature, including through silvicultural arrangements; that declared up to the enforcement date of the present law keep this quality.

Protected areas shall be obvious in the urbanism and land-planning plans, approved according to the law.

Art. 55. - The environmental protection central authority:

- a) at the proposal of the Romanian Academy, shall declare new areas for the extension of the national network of protected areas and natural monuments and frame them into categories;
- b) shall organize the supervision, guard network of protected areas and natural monuments and shall establish their management and touristic approach regime;
- c) shall control the implementation modality of the regulations by those responsible for protected areas and natural monuments management;
- d) shall elaborate, publish, up-date and distribute "Protected areas and natural monuments catalogue", as well as "Red Data Book of plants and animals species" from Romania.

Art. 56. - The local public administration authorities shall ensure the information of the economic agents, population, tourists regarding the existence within the zone of the protected areas and natural monuments, their significance, the established rules and restrictions, as well as the penalties applicable for the non-observance of their status.

Art. 57. - The local public administration authorities, at the request of the environmental protection agencies, of other interested organizations, individuals and legal entities, based on the documentation approved by the Romanian Academy can put under provisional protection, with the aim of declaration, protected areas or natural monuments or other objectives which justifies it.

Art. 58. - The holders of terrestrial or aquatic surfaces located at the boundaries of protected areas, natural monuments or on other territories or on which lands were identified susceptible elements to be protected are obliged to observe their status in order to ensure their passing to the future generations.

Art. 59. - Plant gathering and trades, trapping through any means, holding and trade animals declared as natural monuments, as well as dislocation, holding and trade of minerals, speological and paleontological pieces, from places declared as natural monuments, is forbidden.

The introduction on the country's territory, excepting the cases provided for in the law, of microbial strains, living plants and animals, without the permit issued by the environmental protection central authority, by consultation with the Romanian Academy, is forbidden.

#### *Section 5*

#### ***Human settlements protection***

Art. 60. - In the socio-economic development, land and settlements planning and urbanism process, the observance

of the ecological principles in order to ensure a healthy environment is compulsory. In this aim, the local councils, as well as, according to case, the individuals and legal entities, shall answer for:

- a) the improvement of the urban microclimate, through improvement and maintenance of the springs and the watershed located inside localities, and from the boundary areas, landscape protection and maintenance of the streets cleaning;
- b) placement of the industrial objective, of the transport ways and means, channeling networks, cleaning stations, domestic, streets, industrial waste disposal and of other objectives and activities, without being detrimental to salubrity, environment, resting, treatment and recreation places, human population health and comfort status;
- c) the observance of the special protection regime of the spa resorts, of the areas of touristic and recreative interests, of the historical monuments. Placement of objectives and on-going of activities with negative effects within the surface and protected zones is forbidden;
- d) adoption of the adequate architectural elements, optimization of the settlements density, in the same time with the maintenance and development of the lanes, parks, trees streets protection curtains, landscape arrangements with ecological, aesthetic and recreative functions;
- e) regulation, including through the temporary or permanent interdiction of the access for some types of cars or of activities generating of discomfort for the population in certain areas of localities with a prevalence of settlements, areas designated for treatment, rest, recreation;
- f) adoption of compulsory measures, for all individuals and legal entities, regarding the maintenance of the buildings, yards and their surroundings, green spaces within yards, trees and shrubs;
- g) initiating on local plan of projects for sanitary groups, maintenance and development of streets channeling.

Art. 61 - The environmental protection authorities shall underline, by issuing the environmental permit for the land planning, the measures for maintenance and improvement of the natural landscape fund either natural or man-made for each zone and locality, the deteriorated zones and their landscape and ecological restoration conditions and for the green spaces development and control their accomplishment.

Art. 62. - The local public administration authorities, individuals and legal entities responsible for the public domain administration have the obligations to ensure the achievements of the measures and conditions provided for in article 61.

The change of land use for the lands arranged as green spaces provided in the land planning shall be made according to the law.

Art. 63. - The environmental protection authorities and the local councils shall initiate actions for information and participation, through public debates concerning the urban development and communal management programs, upon the importance of the measures designated to environment and human settlements protection.

## CHAPTER IV

### **Prerogatives and responsibilities**

#### *Section 1*

### ***Prerogatives and responsibilities of the environmental protection authorities***

Art. 64. - The central authority for the environment protection shall have the following prerogatives and responsibilities:

- a) to elaborate and promote the national environment strategy for the sustainable development, in one year interval from the enforcement of the present law;
- b) to elaborate the recommendations for the sectorial strategies and the environment policy, establishing deadlines according to the undertaken phases in the transition toward the market economy, as well as environmental planning, correlated with the land-planning and urbanism policy, ecological restoration and reconstruction with the aim to ensure the national strategy for environment;
- c) to create the organizational frame to afford the access to information, as well as participation at the decision-making process related to the environment - policies, regulations, authorization procedures, land-planning and urbanism - for the other local and central public administration authorities, NGOs and population;
- d) to initiate law projects, technical norms, regulations, procedures and guidelines according to the international standards; to decide norms and other regulations elaborated by other ministries and departments related to activities with negative impact upon the environment or by environment protection organizations and to control their implementation. The special laws projects mentioned at Chapter IV, shall be initiated in 2 years interval and the regulations in one year interval from the enforcement of the present law, excepting the case when is provided for in the present law;
- e) to organize the national integrated monitoring system for all environment factors and the inspection system concerning the environment in one year interval from the enforcement of the present law;
- f) to create the administrative institutional frame for the identification and promotion of the research programs for the development and training of the qualified staff for the supervision, analysis, assessment and control of the environment and shall attest these staff;
- g) to designate expert teams, where is the case, for the reviewing of the environmental audit; authorize its own laboratories for the environmental quality control, of the hazardous waste and substances, pesticides and indicate the types of analysis requested, as well as referee laboratories;
- h) to elaborate and implement programs; to elaborate educational materials concerning the environment protection importance;
- i) to follow the implementation of the programs and measures for the observance of the international conventions, at which Romania is a Contracting Party on the environment field;
- j) to follow and analyze the implementation of the present law and to make annual reports concerning the environmental status, to be presented to the Government; the reports shall be published;
- k) to collaborate with similar organizations and authorities from other countries and to represent the Government in the international relationships in the environment protection field;
- l) to propose to Government tax-reduction, tax-exemption, as well other fiscal facilities for the holders of the activities which replace the hazardous substances in the fabrication processes or invest into the technological processes and products which reduce the impact or the negative impact risk upon the environment, as well as for those which accomplish the special protection

measures, conservation and ecological reconstruction, established by the environmental protection central authority;

- m) to apply penalties to the holders of activities for non-compliance;
- n) to publish guidelines and guide the other ministries and departments, economic agents, individuals and legal entities, with the aim to diminish the negative effects of the economic activities upon the environment and encouragement of the technics and technologies adequate for the environment;
- o) to put at the disposal of the interested ones, the centralized data concerning environmental status, environmental protection central programs and policies;
- p) to periodically consult with the NGOs representatives and other representatives of the civil society, for establishment of the general environment strategy and decision-making process in cases which can affect the environment;
- q)
- r) to prepare by collaboration with the Ministry of Finance the application of new financial instruments, to favor the protection and the improvement of the environmental factors quality, according to those applied on international scale;
- s) to organize in two years interval the body for ecological control;
- t) to declare, with Government information, in special cases, observed based on data obtained from the environment supervision, "hot spots" polluted areas in certain areas of the country and shall have the obligation to elaborate together with other central institutions and local authorities, special programs for the removal of the risk appeared in these areas. After the elimination of the factors with higher pollution risk, based on the new data resulted from the supervision of the environment status evolutionary trends, the respective area is declared reentered into normal status.

Art. 65. - The environment protection agencies shall have at territorial level the prerogatives and responsibilities of the central environmental protection authority, to which they are subordinated, according to article 64. let. b), c), d), h), i), j), m), o), p), r) and t) and make reports of the activities from the former financial year and the implementation of the environmental programs, which shall be published in the local press.

Art. 66. - For the exertion of its functions, the central authority for the environment protection:

- a) requests the required information from ministries, local public administration authorities, individuals and legal entities, referring at the provisions of art. 64 let. a), b), d), e), f), h), i), j), l), p), r) and t);
- b) designates chief inspectors and empowers inspectors at territorial level.

Art. 67. - The inspectors, designated by the environment protection central authority, in order to exert their responsibilities, can enter, according to law, with the authorization from the environment authorities, anytime and in any location where an activity responsible for negative impact upon the environment is on-going.

The affected individual and legal entity, as a consequence of the exertion the inspection responsibilities, can deposit at the competent law court a complaint, in 30 days interval from the date on which was notified.

The amount of compensation for the possible damages produced shall be established by the parties agreement, and in disagreement case, by the competent authority.

## Section 2

### **Prerogatives and responsibilities of other central and local authorities**

Art. 68. - The central and local public administration authorities are obliged to communicate to the central authority for the environment protection, respective to the territorial agencies, all the information requested according to art. 66 let. a) and to apply the provisions of the present law.

Art. 69. - The central public administration authorities have the following responsibilities:

- a) to ensure within their organizational structure, departments with responsibilities in environment protection, with specialized staff;
- b) to develop, with the environmental protection central authority support, restructuring programs according to the national strategy for environment and environment policies and to assist subordinated economic agents at the implementation of the compliance schedules;
- c) to elaborate the specific norms and regulations for the specific field of activity and to give them for authorization to the central authority for the environment protection;
- d) to signal the measure to which some provisions can block an authority to action efficiently for the environment protection and also to show the progress made by the implementation of the present law.

Art. 70. - The Ministry of Health has the following prerogatives and responsibilities:

- a) to supervise the evolution of the human population health in respect to the environment quality;
- b) to control the water and food products quality;
- c) to elaborate, by collaboration with the environmental protection central authority, environment hygiene norms and to control their observance;
- d) to report periodically upon the environment influence on the human population health and to collaborate with the environmental protection central authority for the establishment and application of the measures concerning the improvement of life quality. The reports shall be published annually;
- e) to collaborate with the other ministries with own sanitary network in order to know exactly the human population health status and environment protection in their field of activity.

Art. 71. - The Ministry of National Defense have the following responsibilities:

- a) to elaborate specific norms and instructions, according to the domestic legislation and with the observance of the ecological principles of the environment protection for its field of activities;
- b) to supervise the observance by the staff of the Ministry of National Defense of the environment protection norms for activities within the military areas;
- c) to control the actions and to apply penalties for the infringements made by the Ministry of National Defense staff of the environmental protection legislation in the military field.

Art. 72. - The Ministry of Education shall ensure the changes of the curricula at all levels with the aim to master the concepts and principles of ecology and environment protection for the awareness, training and development in this field.

Art. 73. - The Ministry of Research and Technology shall promote study themes and research programs in order to answer to the established priorities by the environmental protection central authority in this field.

Art. 74. - The Ministry of Transport and the Ministry of Interior shall ensure, based on the norms agreed by the environmental protection central authority, the control of:

- a) car emissions;
- b) noise and vibrations intensity, produced by cars;
- c) materials transport;

Art. 75. - The Ministry of Tourism and the Ministry of Youth and Sports shall elaborate educational programs with the aim to develop a responsible behavior over the environment and shall encourage the application of the ecotourism principles.

Art. 76. - The local public administration authorities have the following prerogatives and responsibilities:

- a) to supervise the implementation of the provisions from the urbanism and land-planning, according to the environment planning process;
- b) to supervise the subordinated economic agents in order to prevent accidentally elimination of pollutants or the uncontrolled disposal of waste and develop systems for reusable waste collection;
- c) to adopt programs for the development of the channeling network, the collection of the fluviate waters, the supply with drinkable water, for the cleaning space of used waters in the localities, as well as for the public transport;
- d) to ensure services with experts in urban ecology and environment protection and to collaborate in this view with the competent authorities for the environmental protection;
- e) to promote a proper behavior of the communities related to the environment protection importance;

Art. 77. - The custom authorities shall have the prerogatives provided for in the present law.

Art. 78. - The Police and Financial Guard are obliged to give their support to by request to the representatives of the environmental protection authorities in the exertion of their prerogatives.

### *Section 3*

#### ***Responsibilities of the individuals and legal entities***

Art. 79. - Environment protection is the responsibility of all individuals and legal entities, for which they shall:

- a) request to the environmental protection authorities environmental permit and/or authorization, related to case, according to the present law;
- b) assist the persons empowered with the inspection, putting at their disposal the records of their own measurements, all the relevant documents and facilitate the control of the activities and sampling;
- c) obey the order of activity ceasing;
- d) support the costs for the damage restoration and remove the consequences produced, reestablishing the conditions prior to the damage production;
- e) ensure own supervision system of the technological installations and processes and for the pollutant analysis and control on the incidental area and keep record of the results, in order to prevent and avoid the technological risks and the accidental pollutants discharges in the environment and report monthly the results of environment supervision to the environmental protection competent authority;

- f) inform the competent authorities and the population in cases of accidental pollutants discharges or in major accident case;
- g) readjust, for the existent activities and propose at the authority request, compliance schedules, in 6 months from the enforcement of the present law;
- h) adopt adequate solutions for environment at the new projects and activities proposals, as well as for the change of the existent ones;
- i) not deteriorate the natural or man-dominated environment by uncontrolled waste disposals of any kind.

Art. 80. - The responsibility for a damage has an objective feature, indifferent of guilt. In the case of many authors involved, the responsibility is solidary.

For activities which generate major risk, the assurance against damages is compulsory.

#### **CHAPTER V Sanctions**

Art. 81. - The infringement of the present law provisions attracts the civil, contravention or penal responsibility, according to case.

Art. 82. - The following facts are considered contravention, and shall be sanction, as follows:

1. With fine from 50,000 lei to 300,000 lei for individuals and from 250,000 lei to 1,500,000 lei for legal entities, for the infringements of the law provisions regarding:
  - a) the responsibilities of the central and local public authorities mentioned at article 9 para. 3, art. 12 para 1, art. 14 para 2, art. 31, 38, 44, art. 60 let. a), d) - f), art. 62 para 1, art. 68, art. 69 let. a) - c), art. 70 let a) - d), art. 71, 72, 73, 74, 75, art. 76 let. a) - e), art. 77 and 78;
  - b) the request of permit/authorization mentioned at article 51 let. c);
  - c) the regulations mentioned at art. 51, let. a);
  - d) the regulations for the terrestrial ecosystems protection, mentioned at art. 52 let a), c) and art. 79 let. i).
2. With fine from 100,000 lei to 600,000 lei for individuals and from 500,000 lei to 3,000,000 lei for legal entities for the infringements of the law provisions regarding:
  - a) the responsibilities of the local public authorities mentioned at art. 19, art. 24 let d) and f), art. 56, art. 60 let. b) and art. 62 para 2;
  - b) deliverance and utilization of the correct data for the elaboration of the impact studies, mentioned at art. 12, para 3;
  - c) the measures, equipment, legal provisions, mentioned at art. 46 let e) and art. 52 let h);
  - d) the regulations for the fertilizers, pesticides and any other chemical substances, water protection and protected areas, mentioned at art. 28, let c) and art. 39, let. d).
3. With fine from 150,000 lei to 750,000 lei for individuals and from 750,000 lei to 3,750,000 lei for legal entities for the infringements of the law provisions regarding:
  - a) the responsibilities of the harbors administration authorities, mentioned at art. 32 let. g);
  - b) the compliance at the environmental protection authority dispositions, mentioned at art. 46 let d) and art. 79 lit.);
  - c) the request for the permit/authorization, mentioned at art. 15 - 17, art. 21 let. b), art. 24 let a) - c), g) - h), art. 28 let. a), e), g), art. 33 let b), c), art. 34 para 2, art. 39

- let a, art. 51 let b), art. 53 let. a), art. 59 para 2 and art. 79 let a) and g);
- d) standards, norms, technological performances, mentioned at art. 33 let. a), art. 39 let. b) and art. 46 let. c);
  - e) the regulations for the fertilizers, pesticides and any other chemical substances, the use of ionizing radiation resources, air and water protection, wise exploitation of the natural resources and the observance of the special protection regime, mentioned at art. 28 let. b), d) and f), art. 33 let j), art. 39 let. c), f) and h), art. 46 let. a), art. 52, let. b), art. 58, art. 59 para 1 and art. 60 let. c);
  - f) own supervision system, mentioned at art. 21 let. c), art. 33 let. e) and f) and art. 46 let. b);
  - g) the record of the substances mentioned at art. 21 let. a) and art. 33 let. d), g) and h);
  - h) the restoration of the natural frame and/or nature conservation, mentioned at art. 24 let. e), art. 39 let. e), art. 52 let. f) - g), art. 79 let. d) and h);
4. The amount of the fines shall be annually up-dated through Government Decision.

Art. 83. - The notification of the infringements and application of the sanctions shall be made by the staff empowered in this aim by the environmental protection central authority, by the police officers, by the empowered staff of the local and county public administration and by the Ministry of National Defense staff empowered in their field of activity, according to the legal competence.

Against the minutes of the infringement finding and of the sanctions application a complaint can be done in 30 days interval from the date of communication of the act.

The complaints shall be solved by the competent law court.

The provisions of Law 32/1968 regarding the establishment and sanction of the infringements, excepting art. 25, 26 and 27, are applicable.

Art. 84. - The mentioned below facts represents infringements and shall be punished as follows:

1. With jail from 3 months to one year or with fine from 250,000 lei to 1,500,000 lei, if these were of nature to endanger the human, animal or vegetal life or health:
  - a) burning of stubbles, reeds, shrubs and herbaceous vegetation from protected areas and from territories subject to ecological restoration (art. 54 para 2 and 3);
  - b) clear-cutting of the wood vegetation outside the forestry fund, located on lands with very large slopes or at the upper limit of the forestry vegetation (art. 52 let. e));
  - c) generation of accidental pollution, due to the lack of supervision of the new works, installations functioning, technological equipment and those of treatment and neutralization, mentioned in the environmental permit and/or authorization (art. 79 let. e));
  - d) generation of pollution through voluntary evacuation in water, air or on soil, of dangerous waste or substances (art. 79 let. i)).
2. With jail from 6 months to 3 years or with fine from 500,000 lei to 300,000,000 lei, if the facts were of nature to endanger the human, animal or vegetal life or health:
  - a) unobservance of the restrictions or interdictions established for the water and air protection (art. 35 - 38, art. 39 let a), b), c), e), f), g) and h) and art. 46 let a) - d));

- b) use of the dangerous baits and electrical means for the killing of the wild animals and fish with the aim of consume or trade (art. 28 let. g) and art. 39 let. c));
- c) washing in the natural waters of the packages from pesticides and other hazardous chemicals, as well as of the transportation or application equipment (art. 39 let. d));
- d) producing of noise above the admissible limits, if those endanger severely the human health (art. 46 let. e));
- e) unobservance of the restrictions and interdictions for hunting and fishing of some protected species or temporary ceased by law and within the strictly protected areas (art. 52 let. h) and art. 59 para. 1);
- f) the on-going of the activity after the environment permit and/or authorization suspension (art. 10 para 2);
- g) non-supervision or non-assurance of the hazardous waste and chemicals deposits (art. 21 let. a) and art. 28 let c)).

3. With jail from 1 to 5 years:

- a) issuing the environmental permit and/or authorization without the compulsory and complete documentation (art. 9 para 3);
- b) presentation in the impact studies and analysis of false information and conclusions (art. 12 para 3);
- c) introduction in the country of hazardous waste and chemicals with the aim of deposit and/or destruction (art. 16);
- d) non-abeyance to testing of every new chemical from country or abroad (art. 15 - 17);
- e) the transport or transit of pesticides, hazardous waste or chemicals without authorization (art. 15, 16 and art. 21 let. b));
- f) the lack of promptly reporting upon any major accident (art. 21 let. c));
- g) hazardous waste burning in non-homologated installations (art. 24 let. c));
- h) the arrangement, without authorization of underground or surface deposits for hazardous waste (art. 24 let. d) and h));
- i) disposal in underground spaces of hazardous waste or chemicals (art. 24 let. d) and h));
- j) production, delivery and use of the unauthorized hazardous chemicals and pesticides (art. 25);
- k) unobservance of the interdictions related with the use on the agricultural lands, of pesticides or chemical fertilizers (art. 28 let. d), e) and f));
- l) generation, due to the lack of supervision of the ionizing radiation sources, of the environment contamination and/or human population exposure at ionizing radiation (art. 33 let. f));
- m) the lack of promptly reporting the increasing above the admissible limits of the environment contamination (art. 33 let. i));
- n) discharges of the used waters and waste from ships or floating platforms directly into the natural waters (art. 39 let. h));
- o) hiding some data or deliver by the public officers of false information regarding the environment and human health quality (art. 64 let j), art. 68);
- p) the continuation of the activity after the disposal of its ceasing (art. 79 let. c));
- q)
- r) lack of tacking measures for the impact reduction upon the environment of the hazardous chemicals and waste (art. 19);
- s) the approval and the facilitation of the entering in the country of hazardous waste and chemicals (art. 20).

4. With jail from 2 to 7 years:



- a) the non-properly application or the lack of tacking measures of interventions in the nuclear accident case;
- b) the refuse of intervention in cases of accidentally pollution of water and coastal zones (art. 39 let. g));
- c) the voluntary generation of pollution through discharges or sinking in the natural waters, directly or from ships or floating platforms of hazardous chemicals or waste (art. 39 let. h)).

5. If the facts mentioned at points 3 and 4 endangered the health or physical integrity of large number of persons, had one of the consequences mentioned in art. 182 from the Penal Code or cause an important material damage, the punishment is with jail from 3 up to 10 years and interdictions of some rights, and in case of death of one or more persons or important damages of the national economy, the punishment is with jail from 7 to 20 years and interdictions of some rights.

The tentative shall be punished.

Art. 85. - The finding and research of the infringements shall be made by the penal bodies, according to the legal competence.

Art. 86. - The non-governmental organizations have the right of action in justice related to the environment conservation, indifferent to which suffered the prejudice.

#### CHAPTER VI

##### **Transitory and final dispositions**

Art. 87. - In the view of the present law the environmental protection central authority is the Ministry of Waters, Forests and Environmental Protection.

*This Law was adopted by the Deputy Chamber in the session of 4th December 1995, according with the provisions of art. 74, para (1) from the Romanian Constitution.*

THE PRESIDENT OF THE DEPUTY CHAMBER  
**ADRIAN NĂSTASE**

*This Law was adopted by the Senate in the session of 11th December 1995, according with the provisions of art. 74, para (1) from the Romanian Constitution.*

THE PRESIDENT OF THE SENATE  
**ION SOLCANU**

Bucharest, 29 December 1995  
Nr. 137.

Art. 88. - In the view of the efficient implementation of the environment protection measures, shall be regulated through special, reviewed or new laws, which shall detail the general dispositions of the present law, the following fields:

- a) the hazardous chemicals and waste regime;
- b) the management of the domestic, industrial and agricultural waste;
- c) the pesticides regime;
- d) the regime regarding the radioprotection;
- e) the on-going of the nuclear activities and ensuring of the radiation sources safety, including the responsibility for the nuclear damages;
- f) water and aquatic ecosystems management;
- g) management of the land reclamation works;
- h) the littoral and coastal zones protection;
- i) the fisheries and fishing;
- j) air protection;
- k) pastures management and conservation;
- l) forestry fund management;
- m) game fund protection and hunting;
- n) protection of the bees and of the meliferous flora;
- o) management of the objective subject of speological, geological and paleontological interest;
- p) protected areas and natural monuments;
- q)
- r) the responsibility for damaging the environment;

Art. 89. - At the date of the enforcement of the present Law, shall be abrogated the Law 9/1973 concerning the environment protection, published in the Official Bulletin nr. 91 from 23 June 1973, as well as any other dispositions contrary to the present law.

## THE MEANING

## of some terms in the sense of the present law

- *environmental permit* - the technical-judicial act through which shall be established the conditions of achievement of a project or an activities from the point of view of the environmental impact;
- *protected area* - an area geographically delineated, with rare natural or high percentage of elements, designated or regulated and managed in order to accomplish specific conservation objectives; includes national parks, natural reserves, biosphere reserves, natural monuments and others;
- *atmosphere* - air mass surrounding the terrestrial surface, including the ozone layer;
- *environmental authorization* - the technical-judicial act through which shall be established the functioning conditions and parameters, for the existent activities and for the new one, based on the environmental permit;
- *authorization for the nuclear activity* - the technical-judicial act through which the competent authority for regulation authorizes the holder of the activity to place, design, buy, produce, build, transport, import, export, receive, locate, put in function, posses, use, operate, transfer, disaffect and dispose of any ionizing radiation source, nuclear installations or arrangements for the radioactive waste management;
- *environmental audit* - procedure to obtain information about causes and consequences of cumulated previous and anticipated negative effects, which is included in the Environmental Impact Assessment;
- *biodiversity* - the diversity among the living organisms from aquatic and terrestrial ecosystems, as well as from the ecological complexes at which they belong; includes the diversity inside species, among species and among the diversity inside species, among species and among ecosystems;
- *biotechnology* - the technological application in which biological systems, living organisms, components and derived from them are used for the accomplishment or modification of products or uses with specific utilization;
- *environment deterioration* - the alteration of the physico-chemical and structural characteristics of the natural components of the environment, biological diversity and productivity reduction of the natural and man-made ecosystems, the affecting of the ecological balance and life quality caused, mainly, by the water, air and soil pollution, resource overexploitation, deficitary management and valorification, as well as improperly land arrangement;
- *waste* - chemicals resulted from biological or technological processes, which cannot be used as such, among which some of them are reusable;
- *hazardous waste* - toxic, flammable, explosive, infectious, corrosive, radioactive or other waste, which introduced or maintained in environment, can damage it, the plants, animals or man;
- *sustainable development* - development corresponding with the present requirements, without affecting the possibility of the future generations to fulfill them;
- *ecological balance* - the aggregate of the status and interrelationships among the component elements of an ecological system, which ensure the maintenance of its harmonized structure, functioning and dynamic;
- *ecosystem* - dynamic complex of communities of plants, animals and microorganisms and their non-living environment, which interact in a functional unity;
- *ecotourism* - practicing of a tourism with the observance of the environmental protection rules;
- *effluent* - any kind of discharge in environment, point or non-point emission, including through run-off, jets, injections, inoculation, deposit, emptiness or vaporization;
- *emissions* - pollutants discharged in environment, including noise, vibrations, electro-magnetic and ionizing radiation, which manifest and are measuring at the source departure point;
- *environmental impact assessment* - quantification of the effects of the human activities and natural processes upon the environment, health and human safety, as well as upon goods of any kind;
- *habitat* - the place or type of place in which an organism or a population exists in natural conditions;
- *environment* - the aggregate of natural conditions and elements of TERRA: air, water, soil and subsoil, all the air strata, all organic and inorganic matters, as well as living bodies, natural systems in interaction including the previously mentioned elements, including the material and spiritual goods;
- *environment monitoring* - a system of supervision, prognosis, warning and intervention, which shall have in view the systemic assessment of the qualitative features dynamics of the environmental factors, with the aim to know the quality status and ecological significance of them, of trends and social involvement of the produced changes, followed by measures which must be taken;
- *natural monument* - rare or endangered plants and animal species, isolated trees, geological formations and structures of scientific or landscape interest;
- *pollutant* - any solid, liquid chemical, as gaseous or vaporous or energy forms (electromagnetic, ionizing, termic, phonic or vibration radiation) which over their introduction in the environment, change the balance of its components and of living organisms and bring the damages to the material goods;
- *damage* - the quantifiable effect in respect to cost of the damages upon the human health, goods or environment generated by pollutants, damaging activities or catastrophes;
- *compliance schedule* - plan of measures which shall include the phases which must be passed in time intervals mentioned through the environmental authorization provisions, by the competent authority, with the aim of observance the regulations regarding environment protection;
- *natural resources* - the totality of the environment natural elements which can be used in the human activity: non-renewable resources - mineral and fossil fuels -, renewable - water, air, soil, flora, wild fauna - and permanent - sun, wind, geo-termal and wave energy;
- *potential ecological risk* - the probability of production negative effects upon the environment, which can be prevented based on the assessment study;
- *hazardous chemicals* - any chemical or product, which, used in quantities, concentrations or conditions apparently non-hazardous, posses significant risk for man, environment or material goods; can be explosive, oxidants, flammable, toxic, noxious, corrosive, irritant, mutagenetic, radioactive;
- *ionizing radiation source* - physical entity, natural, produced or used as element of an activity which can

- generate radiation exposure, through ionizing radiation emissions or radioactive chemicals emissions;
- *the holder of the project or activity* - individual or legal entity, which propose, holds and/or manage an economic or social activity;
- *sustainable use* - the use of the renewable resource in a modality and rate which shall not lead to their long-term decline, maintaining their potential according to the
- 

- requirements and aspirations of the present and future generations;
- *wetland* - area with excess humidity which includes swamps, flooded area, banks, estuaries and lagoons.

ANNEX Nr. II

L I S T

of the activities subject to the environmental impact assessment for the issuing of the environmental permit and/or authorization

**1. Transports**  
**1.1. Traffic auto**

- a) highways;
- b) intense flux motorways;
- c) other main roads; all the roads inside protected areas;
- d) parking areas (lands or buildings);
- e) new lines for public transport.

**1.2. Rail Traffic**

- a) new rail roads;
- b) other rail installations, including the doubling or extension of the existent ones.

**1.3. Water navigation**

- a) harbor installations for the ships belonging to the navigation public companies;
- b) industrial harbors with fix installations for loading and unloading;
- c) recreation harbors with over 100 mooring places;
- d) navigation ways.

**1.4. Air navigation**

- a) airports;
- b) airdromes, excepting heliports;
- c) heliports in protected areas.

**2. Energy**  
**2.1. Energy production**

- a) installations for nuclear energy production (nuclear-electric plants), installations in which self-maintained nuclear reaction (research reactors) is taking place, installations for extraction and production of nuclear fuels and other ionizing radiation generating installations;
- b) thermic installations for the energy production with a power higher than 10 MW;
- c) hydro-electric plants with more than 100 MW power;
- d) geo-thermal installations, including those which exploit the ground water heat;
- e) plants for gas, coke works, coal liquefaction installations;
- f) prospecting, exploration and exploitation of oil, natural gas or coal and other mineral resources, including the marine ones.

**2.2. Energy transport and storage**

- a) installation of transport through pipes of the liquid or gaseous fuels;

- b) the air lines and underground high tension wires, sized for 220 kV or more;
- c) the reservoirs for storage of gas, fuels or carburants;
- d) coal or other mineral resources deposits;
- e) building of the transport means for the hydrocarbons, hazardous chemicals and waste.

**3. Hydrotechnical Works**

- a) regulation works for the natural lakes water level or run-off;
- b) hydrotechnical works, as: embankments, corrections, installations for alluvionary retention or for the protection against flooding;
- c) sedimentary material discharges into lakes;
- d) exploitation of gravel, sand, terapeutical silt or other materials from lakes, water courses or groundwater (except the point extraction motivated by the flooding prevention);
- e) ground and surface water capture works;
- f) coastal zones arrangement works and exploitation of the afferent natural resources;
- g) water supply wells, deeper than 50 m.

**4. Waste And Packages Discharges**

- a) deposits for temporary or final disposal of the hazardous and radioactive waste;
- b) installations for radioactive waste processing and treatment;
- c) cemeteries;
- d) discharges and/or deposits of inert materials;
- e) controlled, bioactive discharges;
- f) controlled discharges for stabilized waste;
- g) installations for waste selection, treatment, recycle or burning;
- h) temporary deposits for the liquid, solid or pastish (siltish) waste;
- i) used water treatment installations.

**5. National Defence\***

- a) arsenals, shooting and exercise grounds for the army;
- b) military airdromes;
- c) other installations belonging to the army, assmible with one type of the installations mentioned in the present annex.

**6. Sport, Tourism, Recreation**

- a) cable railway, teleski (for emphasizing the touristic value of the new ski slopes or of the zones located within the already existent ski lands or for the linkage of different ski slopes);

- b) race tracks for the motor vehicles for the sport contests;
- c) snow cannons;
- d) stadiums with fixed stands provided to shelter more than 20,000 bystanders;
- e) recreation parks;
- f) green areas.

The list of activities subject to impact assessment for obtaining the environmental permit and/or authorization shall be completed by the environmental protection central authority with any new activity, unknown at the date the list was made.

## **7. Industry**

- a) aluminum plants;
- b) steel works;
- c) unferrous metals plants;
- d) installations for the pre-treatment and melting of the old metals;
- e) installations for the chemical products synthesis, including for heavy waters;
- f) installations for the chemical products transformation;
- g) deposits for the chemical products storage;
- h) explosive and ammunitions plants;
- i) slaughters and butcheries with a production capacity over 5,000 t/year;
- j) cement plants;
- k) glass factories with production capacity over 20,000 t/year;
- l) cellulose and paper factories;
- m) factories for the extraction and transformation of the binders and binding materials;
- n) factories which produce agglomerate panels;
- o) installations for timber processing;
- p) installations for textile and leader products;
- q)
- r) production, trade and use of the hazardous chemicals and pesticides;
- s) installations for oil, oil-chemical and chemical products deposits;
- t) industrial units for the food and agrotechnical products production;
- u) knacker's yards units.

## **8. Other Works and Installations**

- a) land reclamation achieved through art works, as well as interventions on surfaces larger than 200 ha and/or accompanied by technical measures with agricultural aims, as irrigation or drainage of the agricultural lands on surfaces larger than 20 ha, as well as general projects of removal from the agricultural cycle;
- b) gravel, sand quarry and other exploitation for extraction of materials which are not used for energy production purposes;
- c) buildings and installations for animal husbandries with capacities over than:
  - 100 places for meat cattle;
  - 500 places for meat pigs;
  - 6,000 places for layer hens;
  - 6,000 places for meat chicken
  - 1,500 places for meat turkeys;
- d) commercial centers;
- e) places for commodities reloading and distribution centers;
- f) fixed equipment for the electric or radio-electric transmissions of signals, images or sounds (only transmission materials, with over 500 kW power);
- g) clearcutting of forestry vegetation outside the forestry fund;
- h) fisheries;
- i) import and exports of plants and animals from spontaneous fauna and flora;
- j) urbanism and land-planning plans.

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\*) With the observance of the legislation in the national defence field

PRESIDENT OF ROMANIA

**D E C R E E**

**concerning the promulgation of the environmental protection Law**

According with art. 77 para. (1) and art. 99 para. (1) from the Romanian Constitution,

**The President of Romania d e c r e e s:**

Unique article. - The environmental protection Law is promulgated and shall be published in the Official Gazette of Romania.

PRESIDENT OF ROMANIA

**ION ILIESCU**

Bucharest, 29 December 1995  
Nr. 417.

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ANNEX XII  
OTHER DOMESTIC REGULATIONS WITH SIGNIFICANCE TO BIODIVERSITY CONSERVATION

- In the field of nature conservation, are in force the following other regulations :

**Law**

- ❖ **Law on land planning – section III – protected areas (Law 5/2000)**

**Governmental Decisions:**

- ❖ **Governmental Decision 26/1991 on accepted the European Convention concerning animal protection in international transport;**
- ❖ **Governmental Decision 127/1994 concerning sanctioning the contraventions at the Norms for environmental protection;**
- ❖ **Governmental Decision 248/1994 for adopting the measures for implementation the Law 82/1993;**
- ❖ **Governmental Decision 989/1998 on the payment of Romania with end in view to participate at the LIFE Program of the European Commission, based for signed the Decision 1/1998 for association between the European Commission and their member states, of the one part, and Romania, of other part, concerning the conditions and the modalities for participation of the Romania at the Community's financial instrument for environment.**
- ❖ **Governmental Decision 104/1999 concerning the organization and functioning of the Ministry of Waters, Forests and Environmental Protection, as body of the central public administration specialized and with responsibility for establishing, promoting and application of the Govern's strategy in the field of management of the water, forest and environmental protection.**

**Orders:**

- ❖ **MWFEP Order 125/1996 for approved the Procedure for regulating the economic and social activities which have environmental impact;**
- ❖ **MWFEP Order 278/1996 for approved the Regulation on attested about the elaborating the studies for environmental impact and environmental audit;**
- ❖ **MWFEP Order 322/2000 for approved the authorization procedure of the activities of harvesting, trapping and/or acquisition and commercialization on the internal market or to export of the animals and plants from the wild flora and fauna, as well as for these imports.**





ANNEX XIII  
INTERNATIONAL DONOR BIODIVERSITY CONSERVATION EFFORTS IN ROMANIA

**1.0 U.S. Agency for International Development**

**1.1 EPIQ – Environmental Fund Law**

While no direct efforts have been made to conserve biodiversity under this Indefinite Quantity Contract, USAID/Romania has strived to coordinate environmental policy changes within the Romanian government and territorial Environmental Protection Inspectorates. Importantly, USAID was instrumental in the development of the newly promulgated Environmental Fund Law, which imposes taxes on industry to generate a reserve fund for environmental restoration. Some of these funds could be used in a manner which may benefit the conservation of biodiversity (e.g., improved fish habitat realized through cleanup of wastes discharge to a river, etc.) as an indirect benefit.

**1.2 Romanian-American Sustainable Partnership (RASP)**

Two projects have been recently funded by USAID which stand to benefit biodiversity conservation.

1.2.1

Project: Private Forests Sustainable Management Project  
US Partner: Auburn University  
Romanian NGO: Composesorat Zetea

Project Period: 2001 – 2003

Funding: USAID Grant: planned \$90,000; obligated \$45,000  
Auburn Cost-Share: \$43,802

Project Objective: To promote integrated, multiple-use forest management by working with a local community forest owners association to promote sustainable forest management practices in an area encompassing over 4000 ha.

Benefits to Biodiversity Conservation: Improved forestry management resulting in less habitat fragmentation and maintenance of large interconnected tracts of forest.

Project: Black Sea Coastal Initiative  
US Partner: Atlantic States Legal Foundation  
Romanian NGO: Mare Nostrum

Project Period: 2001 – 2003

Funding: USAID Grant: planned \$89,672, obligated \$45,000  
Atlantic States Cost-Share: \$41,130

Project Objective: To mitigate effects of pollution on beaches on the Black Sea coast by improving beach management practices.

Benefits to Biodiversity Conservation: Improved management of pollution in coastal areas results in better habitat for birds and fishes.

**2.0 European Union (EU)**

The EU is intensively involved in Romanian infrastructure and biodiversity conservation through its Poland Hungary Assistance with Reconstruction (PHARE) and LIFE - Natura. These efforts are primarily target with accession of the host country to the EU. The Phare program is the EU's first attempt at providing international aid to Eastern Europe, and after the first years of operation, assistance under this program was extended to all Eastern European countries progressing toward accession. Biodiversity related work is target at achieving compliance with LIFE - Natura 2000, the EU Action Plan for Biodiversity Conservation.

**2.1 Poland Hungary Assistance with Reconstruction - PHARE**

Project: Phare – CBC (Cross Border Cooperation)

Project Period: 2000-2002

Funding: Phare Grant 2 000 000 EURO  
Romania contribution 650 000 EURO

Project objective: An international cooperative effort with Hungary, consisting of the establishment of a 12,000 ha cross border protected area in the Mures flood plain.

**2.2 LIFE – Natura 2000**

EU's Life - Natura 2000 program has provided 12 grants to Romania for the conservation of biodiversity. These projects, described below, always require cofinancing from the Romanian Government (though not necessarily always at the same percentage). Total to date EU funding amounts to 3.47 million Euro (\$3.13 Million), with a cost share of approximately 1.2 million Euro (\$1.08 Million) by the RoG.

1. Management plan for the Small Island of Braila - Project period: 1999 – 2002 (29 month)

- Funding: 142,505.64 EURO from EU; 47,501.88 EURO from Romania.  
Project objective: An integrated management plan for 17,590 ha of wetlands.
2. "Satchinez Bogs" conservation - Project period: 1999-2002 (36 month)  
Funding: 142,505.64 EURO from EU; 47,501.88 EURO from Romania.  
Project objective: Conservation measures for this natural wetland area.
  3. Habitat conservation in Bucegi National Park - Project period: 1999-2002 (36 month)  
Funding: 92,225.42 EURO from EU; 30,741.80 EURO from Romania  
Project objective: Conservation efforts for five habitats in the park.
  4. "In situ" conservation of the steppe viper – *Vipera ursinii* - Project period: 1999-2002 (28 month) Funding: 127,938.6 EURO from EU; 127,938.60 EURO from Romania  
Project objective: Conservation of an endangered snake native to the Danube Delta.
  5. *Romanichthys valsanicola* conservation - Project period: 1999-2003 (48 month)  
Funding: 150,905.97 EURO from EU; 50,301.99 EURO from Romania.  
Project objective: Restoring of the living fossil fish habitat in the Valsan River, Arges County by provision of sufficient water to conserve the species.
  6. Eurosiberian Oak forest conservation (*Quercus robur*) - Project period: 1999-2002 (28 month)  
Funding: 60,498.29 EURO from EU, 20,166.09 EURO from Romania  
Project objective: Conservation measures of 90 hectares of oak forest, one of the last remaining dense stands of this species in Romania.
  7. Strengthening of Piatra Craiului National Park - Project period: 1999-2002 (36 month)  
Funding: 205,836.24 EURO from EU, 68,612.08 EURO from Romania  
Project objective: Strengthening of park infrastructure.
  8. Combined measures for natural heritage Apuseni Mountains protection and development  
Project period: 1999-2002 (36 month)  
Funding: 200,993.10 EURO from EU, 274,167.90 EURO from Romania  
Project objective: Biodiversity conservation as a park of the Apuseni Mountains sustainable development area – cofinancing with Life - Environment (another EU grantmaking vehicle)
  9. Iron Gates National Park – habitat conservation and management - Project period: 2000-2001  
Funding: 233,635 EURO from EU, 155,757 EURO from Romania  
Project objective: Generation of a management plan for the 115,655 ha Iron Gates National Park along the shore of the Danube on the Romanian side of the reservoir.
  10. Ecological functional network in Transilvanian plain - Project period: 2000-2002  
Funding: 450,000 EURO from EU, 150,000 EURO from Romania  
Project objective: Ecosystem biodiversity strengthening
  11. Troglotibiotic bat conservation - Project period: 2000-2002  
Funding: 169,697 EURO from EU, 169,696 EURO from Romania  
Project objective: Conservation of underground bat habitat in SW Carpatians
  12. Conservation of dolphins in Romania's Black Sea waters - Project period: 2000-2002  
Funding: 208,315 EURO from EU, 208,315 EURO from Romania  
Project objective: Conservation efforts targeted at saving three threatened dolphin species.

### **3.0 World Bank**

The World bank is quite heavily engaged in bioconservation efforts in Romania. Since 1994, under the Global Environment Facility (GEF), world bank has funded projects in the Danube Delta and in forestry.

#### **3.1 Danube Delta**

Project: Danube Delta Biodiversity

Project Duration: 1995-2000 COMPLETE

Funding: World Bank GEF Grant \$4.5 M

RoG Cost-Share \$0.3 M

Project Objective: The project aim was to protect the Romanian Delta ecosystem and contribute to the conservation of biodiversity within the Delta by strengthening institutional capacity to monitor and manage protected areas effectively, and by working with local community groups to ensure sustainable resource use. Three degraded wetlands areas were restored to near-natural conditions.

Executing Agency & Collaborators: Danube Delta Biosphere Reserve Authority (DDBRA); Danube Delta Institute; Min. of Water, Forest and Environmental Protection (now Ministry of Water and Env. Protection)

Project Approval Date: 8/26/1994

Benefits to Biodiversity Conservation: This GEF project has resulted in the development of a strong management infrastructure. One of the main project goals was to integrate local communities in the development of the management plan for the reserve, which has served to empower the community in decisionmaking and in the identification of its own goals for a viable future.

Sustainability: Although the project is over, the DDBRA and Institute continue to operate at project funding levels. Approximately 60% of their budgets comes directly from the ministry, and 40% from other donors, fees and other means.

### **3.2 Biodiversity and Forestry in the Carpathians**

Project: Integrated Protected Areas and Conservation Management

Project Duration: 1999-2004 ONGOING

Funding: World Bank GEF Grant \$5.3 M

RoG Co-financing \$1.6 M

Project Objective: The project consists of development and implementation of management plans for three top priority sites identified by the Romanian Biodiversity Steering Committee in the Carpathian Mountains, including buffer zone and micro-enterprise, sustainable-use demonstration activities with local communities.

The three project sites include:

**National Park Model**: Retezat National Park Biosphere Reserve (approximately 55,000 ha), in the South Western Carpathians, includes pristine mountain forest and alpine ecosystems. It has a core area of roughly 13,000 ha of relatively undisturbed and pristine mixed and coniferous forest and alpine meadows that are under increasing threat from the impacts of tourism, unsustainable use of natural resources, and uncoordinated developments in adjacent buffer zone areas. The Retezat massif includes 42 endemic plant species; it is also the European center of genetic diversity for two ecologically and economically important groups of grasses, i.e., Hieracium and Poa spp. In addition, Retezat includes a designated "Important Bird Area" (IBA), which is important habitat for 5 bird species listed under appendix II of the Bonn Convention on migratory species of wild animals.

**Natural Park Model**: The proposed Piatra Craiului - Bucegi Natural Park (approximately 100,000 ha) in the South Central Carpathians, includes roughly 3,400 ha of pristine mixed and coniferous forests and alpine ecosystems, surrounded by production landscapes that together support viable populations of large carnivores. Application of the European Ecological Network (ECONET) concept will provide guidance for the sustainable development of eco-tourism, grazing and agriculture, while controlling further fragmentation of natural forests that currently support one of Europe's greatest concentrations of brown bear, wolf and lynx. Bucegi IBA provides important habitat for 4 bird species listed under appendix II of the Bonn Convention, and 33 listed under appendix II of the Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats).

**Sustainable Forest Management Model**: The proposed Vanatori-Neamt Forest Park, in the North East Carpathians includes natural mixed hill-forest and meadows, and provides an opportunity to establish and show-case biodiversity conservation through sustainable, cooperative, public/private forest management. The proposed reintroduction of European bison in production/conservation mixed forest would provide an ecological mechanism, and a focus for public awareness and popular support, for maintenance of the natural ecological diversity of 200,000 hectares of hill forest and meadows. The natural fauna of the area formerly included bison, until they were hunted to extinction at the end of the last century. The site includes virgin, natural and managed mixed forest (predominantly oak, beech, fir and spruce), some of which has been maintained as a hunting reserve since 1475. There are 86 endemic plant species, 16 of which are endemic to the site. The two IBAs that occur in this demonstration site provide important habitat for 7 bird species listed under appendix II of the Bonn Convention, and 30 species listed under appendix II of the Bern Convention.

Executing Agency & Collaborators: National Regie of Forests (NRF) in the Ministry of Waters, Forests and Environment. World Bank has entered into a cooperative agreement with the World Wide Fund for Nature (WWF) which is working in two areas associated with, but not directly a part of, this World Bank GEF project. WWF's activities in the Carpathian Large Carnivore Project (see below) are being coordinated with local park and forest administrators. In addition, advisors from WWF's Forestry Stewardship Council are working with Romanian officials to develop a comprehensive forest certification program for Romania.

### **3.3 GEF - Carbon Sequestration Project**

Project: **Prototype Carbon Fund**

Project Duration: 1999-2004 ONGOING

Funding: World Bank GEF Grant \$3 M

RoG Co-financing \$

Project Objective: Afforestation of 8,000 ha of degraded lands to trade sequestration potential thereof on the global carbon-trading market.

### **3.4 Forestry Development Program**

Project: Increase the contribution to the national economy from the sustainable management of Romanian forest resources

Project Period: TBD

Funding: World Bank GEF \$24.35 Million

RoG Co-financing \$TBD

Project Objective: The program will assist the Ministry of Agriculture, Food and Forests and NFA to:

1. establish effective regulation, supervision and monitoring of forest activities by strengthening the institutional capacity and developing information systems;
2. support forest sector development by establishing a business development and advisory services, improving the efficiency and profitability of the National Forest Authority, supporting the development of private forest owners associations and improving forest infrastructure; and
3. building public awareness and support for sustainable management of forest resources.

### **3.5 Agriculture pollution control**

Project: Agriculture pollution control

Project period: 2000-2002

Funding : World Bank GEF Grant \$6 Million

Cost share: \$ 6 Million (\$2 million from RoG, \$4 Millions from local authorities)

Project objective: Agricultural education program to promote environmental friendly use of pesticides in order to mitigate nutrient pollution of the Danube and the Black Sea

## **4.0 United Nations Development Program**

### **4.1 Project: Conservation and Management of Steppe and Balcanic ecosystem.**

Project period: 5 months, 1999

Funding: UNDP GEF grant: \$23,970, PDF (program development framework)

Romanian Cofinancing: \$11,145

Project objective: To conduct a rapid inventory of the biodiversity in the Hercinic Macin Mountains National Park, covering 11,321 ha. of Park territory and buffer zones, to identify major risks to the conservation of the area. This rapid assessment was conducted in advance of a larger planned conservatio effort for the areas, estimated at \$1.4 millions (\$800,000 from GEF).

### **4.2 Project: Developing the Danube River Basin Pollution Reduction Programme**

Project Duration: 1996-1997 COMPLETE

Funding: UNDP GEF Allocation \$3.9 Million

Co-financing \$ n/a

Project Objective: The immediate goal for this project is to prepare for funding pollution prevention and reduction activities to both restore the Danube River Basin and to protect the Black Sea environment. The main output will be prioritised pollution projects for co-financing by national and international sources, set within a strategic policy framework for the Danube and Black Sea Basin. The project is operationally closed, but not yet financially closed. The semi-final project budget revision is to be prepared shortly. (OD 07/00)

### **4.3 Project: Black Sea Environmental Management**

Project Duration: 1993-1996 COMPLETE

Funding: UNDP GEF Allocation \$9.3 Million

Co-financing \$ 23.3 Million

Project Objective: The BSEP has three primary objectives: to strengthen and create regional capacities for managing the Black Sea ecosystem; to develop and implement an appropriate policy and legal framework for the assessment, control and prevention of pollution and the maintenance and enhancement of biodiversity, and to facilitate the preparation of sound environmental investments. Activities are funded with associated contributions from the European Union's PHARE and TACIS programmes as well as bilateral contributions from Canada, the Netherlands, Switzerland and France. The Black Sea Environmental Programme (BSEP) was established in September 1993. By early 1994, a Programme Coordination Unit had been established in Istanbul and a workplan agreed by National Coordinators (Ministers of the Environment, or their Deputies). During this period, preparatory activities for the implementation of the Convention for the Protection of the Black Sea against Pollution were undertaken. In addition, the BSEP has been assisting the Governments with water monitoring and communication as well as NGO activities. The project was operationally completed on 30 August, 1996 and evaluated in November 1996.

### **4.4 Project: Developing the Implementation of the Black Sea Strategic Action Plan**

Project Duration: 1997 COMPLETE

Funding: UNDP GEF Allocation \$1.79 Million

Co-financing \$ 6.955 Million

Project Objective: The long-term objective of the project is to foster sustainable institutional and financial arrangements for effective environmental management and protection of the Black Sea, in accordance with the Black Sea Strategic Action Plan (BSSAP). The project will provide for the development of the National Black Sea Strategic Action Plans and it will support institution-building at the national and regional level for the development and

implementation of such plans. Project is operationally closed but not yet financially. Bridging activities with European Union funding EU\$150,000.

## **5.0 International NGO Efforts**

### **5.1 Carpathian Large Carnivore Project**

Project: Increase understanding and awareness of large carnivores in Europe's Carpathian mountains

Project Duration: 1993-2003.

Funding: \$190,000 from various sources, including World Wide Fund for Nature, German Wildlife Society and the Romanian State Forest Administration.

Romanian Cofinancing: \$6,000.

Project Objective: The Carpathian Large Carnivore Project (CLCP) has developed a comprehensive conservation program for large carnivores in Romania. The intention is to include all ecological, economic, and social factors relevant to the large carnivore-human relationship, and the amendment of associated problems with that relationship. Other partners include World Wide Fund for Nature (WWF), A Large Carnivore Initiative for Europe, among others. Based in Brasov, the project is focused initially on the mountainous regions near Mount Bucegi and Piatra Criului National Park. The initiative has produced and disseminated literature to local forest professionals. Teachers' aids and scholastic reference materials have also been produced and disseminated to local schools. To promote ecotourism and stimulate economic growth, the CLCP project is working with the growing Agrotourism and ecotourism industry in the area, and organized over 80 trips to visit wildlife management areas in the forests near Brasov in 2001.

### **5.2 The Ramsar Convention on Wetlands: Creation of a Lower Danube Green Corridor**

Project: A multi-country initiative to conserve wetlands along the Danube corridor in Romania, Bulgaria, Moldavia and Ukraine.

Project Duration: To be determined, all four countries signed on June 5, 2000.

Funding: Initially, Ministries of Environment of the four countries, with limited donations from the World Wide Fund for Nature (WWF). Future funding levels uncertain. Romania spent 250,000,000lei (approximately \$10,000) in 2000-2001 to finance a study (see below).

Project Objective: To establish a Lower Danube Green Corridor composed of a minimum commitment of 773,166 ha of existing protected areas, 160,626 ha of proposed new protected areas, and 223,608 ha areas proposed to be restored to natural floodplain. The Lower Danube Green Corridor will comprise the following areas: a) Areas with strict protection regime; b) Buffer zones with differentiated protection regime, in which human activities could be permitted and degraded areas restored; c) Areas where sustainable economic activities could be developed. Each party agreed to prepare an action plan by June 5, 2001 that designates additional areas of floodplain that will be protected and restored. The plan also must ensure that each country establish programs and take all suitable measures to ensure the protection of the Lower Danube Green Corridor wetlands and floodplain habitat by: a) protecting and restoring the wetlands and floodplain habitat in the Danube river basin, taking into account the necessity of protecting some social economic objectives of great importance from floods; b) setting up a common standard system for water quality indicators allowing a clear evaluation of the state of the environment and certain human activities in buffer and economic zones; c) protecting and improving the quality of water and environmental conditions of the Danube river ecosystem. The initiative desires to seek partners locally and nationally as well as internationally and Governments in order to co-operate and assist in the creation and maintenance of a Lower Danube Green Corridor. In 2000, in accordance with the Agreement, the Ministry of Water financed study to identify impacted Romanian wetland areas to further establish the scope of the Green Corridor project in Romania. This project was completed in summer 2001.

### **5.3 WWF Forest Stewardship Council - see GEF Biodiversity project. item 3.2 above**

### **5.4 REC Small Grants Program**

Projects: Regional Environmental Center for Central and Eastern Europe (REC)

Project period: 1993- 2000

Funding: International Donors \$200,000, Including US, Japan, various EU Nations

Romanian Cofinance \$20,000

Objective: Provision of 90 small grants for protected areas conservation, and 6 for different species conservation, including protected areas education. Six grants provided in other areas, including: 2 for organic agriculture, 2 of pollution abatement and 2 for ecological education. Also, 12 scholarship for REC central office training were provided.

## ANNEX XIV REFERENCES

### Official documents

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1. Vadineanu A., Manoleli D. **1990** Romania : **Environmental Status report. IUCN East European Programme**, Vol. II –Albania, Bulgaria, Romania, Yugoslavia, 83-132  
Chapter 1.5 concerns natural biological resources (woodland and forests, game). Chapter 1.6, protected areas and species conservation; Chapter 3 (Environmental trends) includes flora and fauna; protected areas.

2. **Joint environment strategy mission**, February **1991**. Draft Aide memoire  
The 10<sup>th</sup> annex dwells on parks and protected areas (Commission for Protection of Natural Monuments, Department for Conservation and Ecological Restoration-Ministry of Environment); annex 11 addresses: reconnaissance of the Danube Delta; annex 15 , environmental NGOs

3. **National Report regarding Environment and Development in Romania, 1991**  
Flora and fauna data, status of the forests, biodiversity conservation, international co-operation, policies and strategies.

4. **National Report of Romania**, UNCED, **1992**  
The third section comprises informations regarding biodiversity conservation.

5. **National plan for physical planning – protected areas**, 1998  
The Introduction to this plan mentions international conventions and laws used as the basis to this plan. The first and the second annexes cover all the natural protected areas and Natural Monuments in Romania.

6. **Interim Agreement EC/Romania, 1992**  
Article 30 (Europe Agreement 36) refers *inter alia* to protection of health and life of humans, animals and plants, and the protection of natural resources.

7. **Environmental Management and Protection of the Black Sea**. Technical Experts Meeting, Constanta, Romania, **1992**, Water Pollution Control.  
Some considerations about the influence of water pollution on biological productivity.

8. **Environmental Management and Protection of the Black Sea**. Technical Experts Meeting, Constanta, Romania, **1992**, Rehabilitation of Natural Resources  
Documents recent changes in the structure of species with important impact on the sea ecosystem.

9. **Environmental Management and Protection of the Black Sea**. Technical Experts Meeting, Constanta, Romania, **1992**, Programme Coordination Meeting.  
The proposed programme includes as a priority problem the conservation of key ecological areas.

10. **Plan de actiune pentru 1994 al Comitetului national UNESCO-MAB cu participare internationala** (Action Plan 1994, National Committee UNESCO-MAB), 1994, Bucharest-Sinaia  
The Status of Biospheres Reserves from Romania; National Strategy for Biodiversity Conservation; The Conservation of Wetlands.

11. **NGO alternative to the proposal of Elements of the National Action Program for Environmental Protection**, Bucharest **1994** (translation of the chapter with the same name of the “Environmental Protection Strategy”, issued by the Romanian Ministry of Waters, Forests and Environmental Protection)  
To initiate and promote long term research programs for biodiversity; to establish a network of protected areas and a local administrative management system; to formulate sectorial action plans for natural habitat protection and to conserve biodiversity outside of the protected areas.

12. **Parks for Life: Action for Protected Areas in Europe. IUCN, 1994**  
Protected areas of Europe.  
The Strategy of the Romanian Government for Biodiversity Conservation, 1994

13. **World Bank, Mission in Romania**.Portfolio of projects. **1998**

Strategia Protecției Mediului (Strategy of Environmental Protection), Romania, Ministry of Waters, Forests and Environmental Protection, **1994**

Chapters 3.4 and 3.5 present data on flora, fauna, natural areas, biodiversity, the status of the forests. A list of mid-term objectives includes increasing of the importance of forest, biodiversity conservation, wetland restoration and protection.

**14. Strategy for Environmental Protection, 1995**

The first section comprises a chapter concerning Flora, Fauna, Natural Reserves, and Biodiversity. The second section comprises strategic objectives and the third one, National Action program for Environmental protection.

**15. Report regarding National Environmental Action Programme.** Ministry of Waters, Forests, and Environmental Protection, **1995**

Biodiversity and natural habitat preservation is discussed including the presence of some threatened fauna and flora species and the extinction of others; insufficient protection of wetlands and sensitive coastal areas.

**16. Strategia de dezvoltare a silviculturii** (The strategy for forestry development). Ministry of Waters, Forests and Environmental Protection, **1995**

Data and information regarding the National Forestry Fund, its structure, productivity, the availability of timber, characteristics of Romanian forestry and its strategic objectives including biodiversity conservation, the threats to Romanian Forests.

**17. First national communication concerning the process of applying the provisions of the Framework Convention on Climate Changes. 1995**

Ministry of Water, Forest and Environmental Protection

**18. Strategia nationala si planul de actiune pentru conservarea biodiversitatii si utilizarea durabila a componentelor sale** (The National Strategy and the Action Plan for the Preservation and the Lasting Use of the Biological Diversity) **1995-1996 Geomatics Report**

The main features of the natural bio-geographical area; aspects of the biological diversity on the Romanian territory; threats to biological diversity; the present situation of biological diversity in Romania.

**19. Strategia pentru Conservarea Biodiversitatii si Planul de Actiune in Romania** (National Strategy for Biodiversity Conservation and the Action Plan in Romania), **1996**

Romanian biological diversity, threats to biodiversity, institutional and legal framework, strategy for biodiversity conservation, action plan.

**20. Report concerning The National Program for Research and Development ORIZONT 2000 in the year 1997.** Ministry of Research and Technology, Bucharest

A list of priorities for the Division of Biology-Biotechnology includes the study of genetic diversity and diversity of species.

**21. Agenda 2000 – Commission Opinion on Romania's Application for Membership of the European Union, Brussels, 1997**

Chapter 3.4. (Sectoral Policies) includes topics on agriculture and fisheries. Chapter 3.6. (Quality of Life and Environment) includes a topic concerning the environment.

**22. Carta Verde. Dezvoltarea Rurala in Romania** (Green Cart. Rural Development in Romania), 1998, The Government of Romania, Ministry of Agriculture and Food, Bucharest

Regarding development of rural areas inducing many threats to biodiversity.

**23. Conservation and Sustainable Management of Forests in Central and Eastern European Countries.** Multi-country report. *European Comission Phare Programme*, 1999

Forest biodiversity, the concept of ecological networks, conservation of forest genetic resources, specific forest damage.

**24. Romania: Strategia Nationala pentru Dezvoltare Durabila** (Romania: National Strategy for Sustainable Development), 1999, *Project PNUD/CNDD, Edit. NOVA*, Bucharest

The 2<sup>nd</sup> section includes a special section concerning biodiversity.

**25. National Strategy for Sustainable Development**, 1999

This document, supported by the Romanian Government was produced by a multi-faceted Working Group. This is the first time this type of coordinate effort has taken place in Romania. Section 4.5. is dedicated to biological diversity.

26. **Romanian biodiversity monitoring programme.** Biodiversity information management system. *Workshop*, Ministry of Waters, Forests and Environmental Protection, Bucharest, 2000

Based on the Biodiversity Conservation Management Project it includes special features of Romanian biodiversity, and the current status of protected area management

27. **Directory of financing sources for environmental investments in Romania.** Catalogue sponsored by USAID, Bucharest, 2000

Foundations and Assistance Programs: LIFE nature

28. **Mid-term national strategy for economic development of Romania, 2000**

The 6<sup>th</sup> section emphasizes the problems of environmental protection – including nature conservation; biodiversity conservation and sustainable use of natural resources; management of protected areas, physical planning and regional development.

29. **Program de guvernare pe perioada 2001-2004** (Program of Government, 2001-2004), Bucharest, December 2000

Chapter 3.3.10 mentions protection and conservation of nature with biodiversity conservation efforts focussed on threatened flora and fauna species in the network of natural areas.

30. **Strategia de dezvoltare pe perioada 2001-2005** (Development strategy for the period 2001-2005), 2001, Ministry of Public Works, Transports and Housing, National Society of Railroads

That development of railroads will induce some threats to biodiversity.

31. **Strategia de dezvoltare a Programului national de autostrazi** (Development strategy for the National Highway Program), 2001, Ministry of Public Works, Transports and Housing

Important impacts on biodiversity associated with highway construction.

32. **Strategia de reabilitare a drumurilor nationale** (Strategy for the rehabilitation of the national roads), 2001, Ministry of Public Works, Transports and Housing

Will be generated important impacts on the biodiversity.

List of the legislative initiatives adopted in Chamber of Deputies in 2000 and 2001

33. **Warning Report regarding the Crisis Potential of Romania.** Early Warning Report. *UNDP, Country Office Romania – Academic Society of Romania*, 2001

This report allows comments regarding the threats on biodiversity generated by poverty and economic difficulties.

34. **Ordonanta de Urgenta privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei si faunei salbatice** 2001 *Guvernul Romaniei* (Urgent Injunction on the natural protected areas regime, natural habitats, flora and fauna conservation)

The goal: to guarantee conservation and sustainable use of natural capital.

35. **The Danube Action Plan.** GLOBE Europe Danube Conference Project, 2001

Biodiversity is considered to be a priority. One of the targets of GLOBE Europe Danube Conference was biodiversity.

36. **Memorandum of the President of the International Bank for Reconstruction and Development and the International Finance Corporation to the Executive Directors on a Country Assistance Strategy of the World Bank Group for Romania**, 2001, Document of the World Bank

37. **Implementation Completion Report on a GEF Grant in the amount of sdr 3.1 Million to the Government of Romania for Danube Delta Biodiversity Project**, 2000, Document of the World Bank

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Public participation is necessary in the process of environmental licencing and allowable under Romanian law.

2. Bruun B., Delin H., Singer A., Zetterstrom D 1999 **Pasarile din Romania si Europa (Hamlyn Guide to the Birds of Romania and Europe)**, Romanian Version Munteanu D., Ornithological Society of Romania, Octopus Publishing Group Ltd

A complete guide for the species of birds from Romania, including data and information on biology, ecology, etology and distribution. Over 530 species illustrated in color, more than 465 distribution maps.

3. Catuneanu I. et col. 1972 **Nomenclatorul pasarilor din Romania**. Ocrot.nat., **16**, 1, 127-145

4. Ciutacu C., Chivu Luminita 2001 **Fondul de mediu in Romania** (The Environmental Fund in Romania). Romanian Academic Society. *Romanian Center for Public Policy*  
Environmental tax on polluters etc.

5. Dracea M. 1938 **Consideratiuni asupra domeniului forestier al Romaniei** (Considerations upon forested land of Romania). *Edit. Bucovina*, Bucharest  
A framework of the Romanian forests from 1930-1940.

6. Dragulescu C. 1992 **Botanica populara in Marginimea Sibiului** (Ethno-botanically elements gathered near Sibiu), Sibiu  
1278 local names of 380 plant species used in medical practices or as food.

7. Drugescu C. 1994 **The Zoogeography of Romania**. Edit. ALL, Bucharest  
Fundamentals of zoogeography, specific for Romania: faunistic regions, endemic and relic species, characteristic habitats, anthropogenic influences, hunting and protection.

8. Georgescu C., Manea G., Manoleli D., Vadineanu A. 1995 **Romanian Environmental NGOs Guidelines**. Adapted at the *IVth National Conference of Environmental NGOs*, Eforie Nord, 7-10 October 1995  
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9. Gombosiu Valentina, Nalbant T.T. 1971 **Catalogul –in patru limbi – al pestilor din apele Romaniei** (Catalogue –in four languages- of the fish species of Romania). *Buletinul de cercetari piscicole*, ¾  
The names, in four languages (romanian, english, french, german), of fish species native to Romanian waters

10. Grossu A.V. 1981-1983 **Gastropoda Romaniae**, vol. I-IV, *Edit. Litera*, Bucuresti  
A comprehensive list of species of snails in Romania.

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12. Kalaber L.V. 1997 **Quelques elements concernant le statut du loup en Roumanie**. *Bull.Soc.Neuch.Sci.Nat.*, **120**, 2, 125-130  
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The delineation of Romania's ecoregions based upon the ecological potential specific to different types of ecosystems with the aim of substantiating decision made in the environmental management field.

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31. **Accesul la informatie si participarea publicului la luarea deciziilor si elaborarea politicilor de mediu** (The access to information and public participation in decisions regarding the environment), 1995, Ecological Group for Co-operation Nera.  
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