

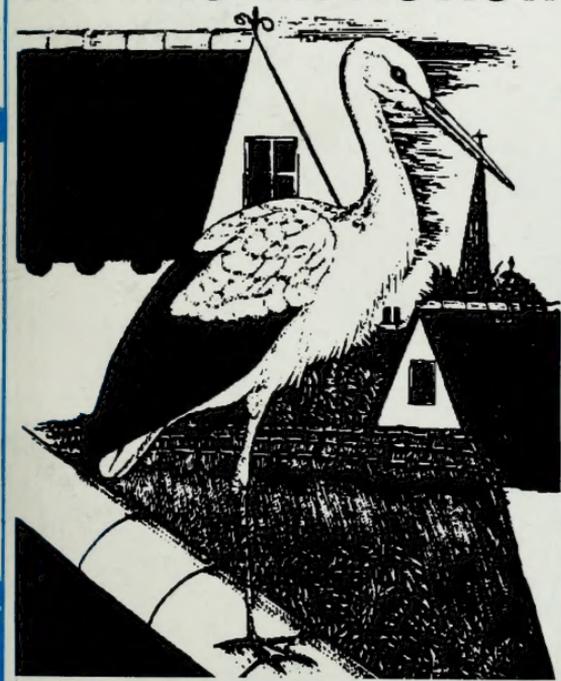


World Conservation Union

East European Programme

# Protected Areas in Eastern and Central Europe and the USSR

## An Interim Review





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**Protected Areas in  
Eastern and Central Europe  
and the USSR  
(An Interim Review)**

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# Contents

<b>Foreword</b> .....	4
<b>Acknowledgements</b> .....	4
<b>Country Accounts</b> .....	5
Albania, the People's Socialist Republic of.....	6
Bulgaria, the People's Republic of.....	10
The Czech and Slovak Federative Republic.....	17
The Eastern Länder of the Federal Republic of Germany (formerly the German Democratic Republic).....	24
Hungary, the Republic of.....	31
Poland, the Republic of.....	37
Romania.....	44
The Union of Soviet Socialist Republics.....	49
Yugoslavia, the Socialist Federal Republic of.....	56
<b>Protected Area List</b> .....	63
Albania, the People's Socialist Republic of.....	64
Bulgaria, the People's Republic of.....	65
The Czech and Slovak Federative Republic.....	68
The Eastern Länder of the Federal Republic of Germany (formerly the German Democratic Republic).....	71
Hungary, the Republic of.....	79
Poland, the Republic of.....	81
Romania.....	84
The Union of Soviet Socialist Republics.....	87
Yugoslavia, the Socialist Federal Republic of.....	96

## **Foreword**

The changes that have transformed east and central Europe, politically and economically, have also resulted in a fresh evaluation of the state of the environment and the consequent need to restructure environmental policy. As we approach the end of 1990 there is continued uncertainty as to the final shape that this environmental policy will take. This fluid situation shows no sign of settling. Throughout the region environmental legislation, administration and management are in the process of evolution: different countries are changing at different rates. The IUCN's East European Programme, therefore, faced with a choice between waiting for all the changes to be finalised or of presenting a snapshot of the situation, one year after, chose the latter, in the full knowledge that what is written here will soon almost certainly be in need of updating. The opportunities to safeguard sites of biodiversity will also change (and disappear) rapidly. Witness the hectic rush to develop the previously closed and thus protected border areas, and the move to privatise and break-up existing protected sites. Hence the need to provide information, now.

This report is therefore seen as a contribution to efforts to ensure that those areas already protected remain and to secure new sites of biodiversity within a network of protected areas.

The information for any one country has been compiled from a number of available sources and does not represent the views of any one individual. The information contained in this publication consists of standardised descriptions of the protected areas systems in each country using the best available information; a listing of protected areas qualifying for UN List status; and maps showing the known locations of national parks (a category which has seen a rapid increase in designations in the region).

## **Acknowledgements**

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## Country Accounts

## COUNTRY: People's Socialist Republic of Albania

AREA 28,752km<sup>2</sup>

POPULATION 3,200,000 (1989) Natural Increase 2% per annum

GNP US\$ 992 per capita (1988)

### POLICY AND LEGISLATION

The Albanian Constitution proclaims that "The protection of the land, the natural resources and the waters from damage and pollution is a duty of the state and of all public and economic organizations, as well as of all citizens" (1976).

All land and natural resources are legally in the public domain, making all protected areas state property. Two relevant pieces of legislation are the Law on Forest Protection, No. 3349 of 3 October 1963, and the Law on Hunting, No. 1351 of 1 November 1951 (IUCN, 1967; Borisov *et al.*, 1985). National parks are created under these laws.

Bogliani (1987) states that protected areas are classified into three categories. *Parquet Nationale* (National Parks) have the dual role of providing for public access, recreation and education, and for protection of the landscape. In national parks no permanent human occupation or exploitation is permitted. Hunting is prohibited and ancient grazing rights have been withdrawn, although villagers from neighbouring settlements are allowed to gather dead wood. Tourism is encouraged (IUCN, 1971). Each national park has a forest lodge for accommodation and vehicular access is permitted. *Integral Reserves* are strictly protected for nature conservation. A total protection regime is imposed, with no entry, occupation or exploitation permitted. Hunting is prohibited and ancient grazing rights have been withdrawn. *Orientated Reserves* provide for traditional human activities, education and protection of the landscape or wildlife. Recreational fishing is permitted (Bogliani, 1987).

### INTERNATIONAL ACTIVITIES

Albania is party to the World Heritage Convention, which was ratified on 10 July 1990. No natural sites have yet been inscribed on the World Heritage list. It also became party to the UNEP Regional Seas Programme (Barcelona Convention) in the same year, thereby

completing the list of Mediterranean countries participating in this convention. Proposals for the inclusion of six coastal sites under the convention are being considered (J. de Grissac, 1990 pers. comm.).

## ADMINISTRATION AND MANAGEMENT

There is a state body with responsibility for nature protection (Nowak, 1974), within the Ministry of Forest and Water Resources (IUCN 1971; Borisov *et al.* 1985). The Ministry of Agriculture is responsible for wetland conservation.

Within national parks, funds are allocated to cover salaries, as well as for reforestation, other forestry programmes, civil engineering works, construction of pioneer camps, villas and infrastructures such as electricity and water supplies.

## SYSTEMS REVIEWS

According to F. Markgraf (Davis *et al.* 1986), there are four natural vegetation zones moving from east to west across the country, beginning with a narrow coastal strip in the west, now largely agricultural, but with some maquis, phrygana and secondary steppe. To the east of this lies a broad Mediterranean and transitional deciduous forest zone. European deciduous montane forests of beech *Fagus sylvatica* dominate the eastern mountain belt, with scattered patches of Macedonian pine (*Pinus peuce*). Finally, in the highest elevations along the Yugoslavian border, there is a subalpine and alpine zone.

The coast, which appears to be the least altered part of the country, is approximately 400km in length and physically diverse. There are four large lakes (between 6,000ha and 35,000ha) shared with Yugoslavia and/or Greece. All of these had significant waterfowl populations in the past, but their importance has greatly diminished as a result of extensive land reclamation and drainage. Similar strong pressures to convert land for agricultural purposes, coupled with a drive against malaria, have led to the drainage and reclamation of extensive areas of coastal marshes and lagoons. Between 1966 and 1970, 20% of all capital investment was devoted to major hydrological projects. Drainage had already started in 1946 with the Maliq Lake and marshes. Between 1946 and 1974 some 60,000ha of wetlands were drained and a further 170,000ha were 'improved' for agricultural production; of the remaining 30,000ha of coastal plains it is proposed that some 18,000 ha will be developed for agriculture and intensive fisheries in the future. Concern has been expressed (Imboden, 1990, *in litt.*) over several new projects for soil improvement and land reclamation. Three of these overlap or adjoin coastal wetlands considered by the ICBP and IWRB to be of international importance (Kusse and Winkels 1990).

Water pollution is affecting fisheries and possibly flora and fauna; in the coastal plains

the more important rivers are visibly polluted by industrial wastes and there has been a suggestion to establish 'river parks', similar to those in Greece (Prigioni *et al.*, 1986) Many of the rivers in the coastal belt have been regulated and canalised.

Some 43% of the country's surface area is forested; some 16 million trees were planted in 1983. Forests are used for honey and silkworm production, with only small amounts of wood exported (Ellenberg and Damm, 1989). A major management proposal for 1987 was to combat erosion by further forestry development. The plan involved a national undertaking to expand and improve the forests. During December 1987 over 9 million saplings were to be planted, about 2,400ha of forest improved and 12,000km<sup>2</sup> of mountainous land protected (Anon., 1987).

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- Secretary, Central Commission for Environmental Protection, The Council of Ministers, Tirana.

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DATE October 1987; reviewed October 1990

## COUNTRY: People's Republic of Bulgaria

AREA 110,911km<sup>2</sup>

POPULATION 9,000,000 (mid-1989 estimate) Natural Increase 0.1%

GNP US\$ 7,129 per capita (Anon, 1990)

### POLICY AND LEGISLATION

The Constitution refers to nature conservation under Article No.31 (1971). In Articles 22 and Article 23 of the Constitution proposals for designation of protected natural sites can be submitted by enterprises, institutions, organizations and by individuals.

Countryside protection dates from 1928 (Carter, 1977), when a 'union for nature protection': the Council for the Protection of the Countryside was formed. The first Conservation of Nature Act was issued in 1936 (Cеровsky, 1986). Little more was achieved during the war (1939-45) and in the ten years that followed. A nature protection decree was formulated on 27 August 1960 and brought into force by rules published on 5 June 1961, with the legislation applying equally to reserves and national parks (Article 7 of the Rules) (IUCN, 1971).

The 1967 Law on Nature Protection covers the preservation, restoration, rational use of nature and natural resources, monuments, historical sites, development of science and scientific research. This Law, and the 1969 Code of its Application, effectively repealed the Ordinance related to the protection of nature and the Decree of 1960.

The duties of all organisations and agencies in the field of flora, fauna and habitat protection are further defined in a number of acts including Protection of Air, Water Resources and Soil from Pollution (1963), Water (1969), Protection of Cultivated Lands and Pastures (1973) and Forests and Hunting and Fishery. Some other acts may also include relevant sections (ECE, 1986).

The *Komitet za opazvane na prirodната sreda* (KOPS) (Committee for Environmental Protection) of the Council of Ministers was set up in 1976. KOPS declares a locality or an object under protection, by an order of the Committee's President, after consultation with the Academy of Science's Institute of Ecology and interested departments on whose territory the objects are located. These orders are published in the State Gazette.

In 1977 a new document, entitled 'The Guidelines for the Protection and Reproduction of the Environment in the People's Republic of Bulgaria' was approved by State Council (Cerovsky, 1986). This document covers environment preservation, restoration and management policies and now plays a central role in formulating state environmental policy (Stoilov *et al*, 1981). Another major policy document written in the early 1980s was the General Plan of the People's Republic of Bulgaria. This treats the environment as a complex integrated system. In particular the sections dealing with 'Recreation' and 'Standard Regional Planning Measures' refer to the important role played by legally protected areas (Mladenova and Paychev, 1985). Resources needed for protection measures are provided for in five-year and annual plans adopted by the Government and People's Assembly (Parliament) (ECE, 1986).

According to the 1967 Law there are five types of protected areas: nature reserves, national parks, nature sanctuaries, protected sites and historical sites. All land is state owned and reserve boundaries are marked with symbols and occasionally fenced.

*Rezervat* (nature reserves): these are areas strictly protected, containing rare plant and animal communities, threatened by depletion or extinction, and used for scientific research. Economic exploitation, including any agricultural and industrial activities, is prohibited. Admittance to, and movements in, reserves requires the approval of KOPS and is restricted to defined roads and paths. A special directive was adopted designating the creation of buffer zones around the reserves. In exceptional circumstances clear felling is allowed for forest protection reasons.

*Naroden park* (national parks): cover comparatively larger areas suitable for short-term recreation and tourism and for research. Other categories of protected areas may be included within the boundaries of national parks. National parks are also termed 'People's Parks' and tourism development is encouraged especially by state enterprises such as Balkan Tourist. Entry is free and unrestricted. Tourism may be well developed in the form of road networks, tourist chalets, resthouses, restaurants, cable cars and camping sites (IUCN, 1971). These areas have general protection throughout, with no settlement or exploitation allowed; hunting, fishing and flower-picking is forbidden. Some national parks are zoned into a scientific zone (no exploration, visitors restricted to certain paths), a tourist zone (accommodation, tree-felling and afforestation) and a commercial forest zone (IUCN, 1971).

*Nature Sanctuaries*: specific natural formations protected because of aesthetic and scientific significance, preserved for public interest due to national, geographic or scientific values as well as phenomena of aesthetic, natural or historical value, which includes single items, such as trees and rocks.

*Protected Sites*: specific locations with picturesque landscapes or characteristic habitats suitable for recreation.

*Historical Sites*: the sites of major historical events, and historical monuments, graves as well as protected specific natural features of the landscape and their surrounding areas. Certain sites are protected jointly by KOPS and the Committee for Culture and the Institute for the Monuments of Culture (Stoilov *et al.*, 1981).

## INTERNATIONAL ACTIVITIES

The World Heritage Convention was signed on 7 March 1974 with two natural sites inscribed in 1983. The Ramsar Convention instrument was deposited on 24 September 1975 and the Paris Protocol instrument was signed on 27 February 1986; four sites have been designated. Seventeen sites, covering 25,201 ha, were registered as Biosphere Reserves by UNESCO in 1977. The Institute of Ecology is also active in international environmental conservation activities organized by UNESCO, UNEP, FAO and CMEA.

## ADMINISTRATION AND MANAGEMENT

In 1971 the Ministry of Forests and Environmental Protection was established; this Ministry largely concentrated its attention on natural sites, establishing new reserves and improving those already in existence (Stoilov *et al.*, 1981). In 1972 the Research and Coordination Centre for Preservation and Restoration of the Environment of the Bulgarian Academy of Sciences was established (Cerovsky, 1986).

In 1976 the Committee for Environmental Protection, the *Komitet za opazvane na prirodната среда* (KOPS), was set up at the Council of Ministers. This was the main governmental inter-departmental coordinating and controlling body, the President is of ministerial rank and the committee has 16 regional inspectorates and one scientific centre (Cerovsky, 1986). It had the task of controlling, coordinating and implementing the policy and decisions of the Central Committee of the Bulgarian Communist Party, the National Assembly, the State Council and the Council of Ministers on questions of environmental protection and restoration and water resource utilization. The committee elaborates state plans on nature protection along with plans for research and development (ECE, 1986). The committee was also directed to establish a system to provide scientific data for matters relating to environmental protection - the Unified National System for Observation and Information on the State of the Environment was set up which includes a subsystem of 'Protected Natural Sites and Objects'. A card index on protected natural sites has been prepared by the committee, as well as sets of methods for a comprehensive study of protected natural sites and objects (Stoilov *et al.*, 1981).

In December 1986 the ministerial council set up at the Council of Agriculture but was abolished in 1987 when the Ministry of Agriculture and Forests was created (Ashley, 1988).

In the party congress of April 1986, the Bulgarian Communist Party committed itself to a new "National Programme for Environmental Protection to the Year 2000 and Afterwards". This was a long-term ecological programme which largely concentrated on the control and reduction of pollution control. In May 1988 a Politburo decision recommended that KOPS be merged with the Ministry of Agriculture and Forests to create the new Ministry of the Land, Forests and Environmental Protection (Ashley, 1988).

The Institute of Ecology, formerly known as the 'Research and Coordination Centre for the Conservation and Renewal of the Environment' (NKCOVOS), at the Academy of Sciences, has worked alongside KOPS in the designating of protected areas. It is a research institute with a staff of 60 who coordinate ecological research within the Academy of Sciences and with other scientific research establishments and universities (Cerovsky, 1986). It is also active in international environmental conservation activities. It maintains lists and data describing protected areas (Fisher, 1990).

Direct administration of protected areas falls to a number of bodies with varying levels of responsibility. These include Ministry of Forests and Forest Industry, Ministry of Architecture and Works, Balkan Tourist, Academy of Sciences, Nature Protection Commission, Ministry of Education, Committee of Arts and Culture, Academy of Agricultural Sciences and the Bulgarian Union of Hunters and Fishermen. Other organisations involved include the Standing Commission on Nature Protection of the People's Assembly and the Council on the Protection and Reproduction of the Natural Environment (within the State Council). The on-the-ground supervision of reserves is the responsibility of the forest administration and is carried out on a part-time basis by forest rangers. The control of reserves has been improved. Over 1200 checks were carried out in 1977 and 160 violations were notified, falling in 1978 to 1121 checks and 144 violations (Stoilov *et al.*, 1981).

Voluntary environmental conservation groups were, until 1990, organized in the framework of the Patriotic Front, through a system of Committees for Nature Conservation at the Patriotic Front Councils on all levels. These were centralised in the All-National Committee for Nature Conservation at the National Council of the Patriotic Front, *Obshchenarodniya Komitet za zashchita na prirodata*, which promoted environmental awareness.

The Bulgarian Union of Anglers and Hunters is active in the role of conservation, while the Bulgarian Hiker's Union publicises natural sites within the country and promotes care of these sites (Stoilov *et al.*, 1981). 'Ecoglasnost' is a non-governmental organisation set up in early 1989 with a particular interest in ecological problems. It has become a very influential movement and has been involved in a number of anti-pollution campaigns. In its 'Charter '89' Ecoglasnost devotes considerable space to its policies on protected areas, which it suggests should be greatly expanded, with numerous new areas being designated in all biogeographical regions. Ecoglasnost is made of local groups, about 50 in Sofia and 30

in the rest of the country. There is a possibility it will become more involved in party politics in the future (Fisher, 1990). Recently, the Wilderness Fund, another non-governmental organisation, has been set up. It aims to further the conservation of natural areas and to facilitate the self-recovery of areas that have suffered human alteration (Ivanov, 1989).

## SYSTEMS REVIEWS

The country straddles the boundary between continental and Mediterranean climates. It can be approximately divided into five regions: the fertile Danube plain in the north, running along the border with Romania; the Stara Planina Mountains, a large 600km mountain chain running east-west, dividing the country; the central plain and valleys of the River Maritsa immediately south of the Stara Planina; the mountains of the Rila Planina, Pirin Planina and Rodopi Planina in the south-west and the relatively flat areas along the Black Sea coast (Grimmett and Jones, 1989). Lowlands (0-200m) cover 31% of the total surface area of the country; hills (200-600m) cover 41%; highlands (600-1600m) cover 25% and mountains (over 1600m) cover 3%. The climax vegetation is *Quercus* up to 1000m, *Fagus* between 1000 and 1500m and coniferous woodland up to 2200m, with some especially well-developed stands of *Pinus peuce* in the Rila, Pirin and Rodopi mountains.

Under the initiative of the 1928 Council for the Protection of the Countryside a number of bills and decrees were published and the country's first national park, Mount Vitosha, was declared in 1933. After this date few new areas were established until the 1960s. The total number of sites protected has risen from 50 in 1940 to about 130 in 1973 to 3922 in 1989. In 1989 these areas covered 195,155ha or nearly two per cent of the country (Anon., 1989). It is planned to increase this figure to three per cent by the year 2000 (ECE, 1986). Zoogeographically, 77% of reserves belong to the Balkan and the Rila-Rhodopi Range. An inventory has been carried out of representative ecosystems covering areas over 1000ha in separate reserves - over 20 forest formations have been catalogued. In 1982 forests covered 38,590km<sup>2</sup>. (35% of the land surface). More than 25% of forests are under special protection (ECE, 1986).

The main wetlands lie along the Danube and the Black Sea coast - many of the marshes and coastal lakes have been drained largely for agriculture; the remainder are particularly important for migratory bird species. The north-eastern part of the Black Sea coast has some remnant steppe areas. The lowlands have largely been converted to agricultural land. In the uplands large areas have been devastated by grazing, mostly by sheep. Tourism and especially skiing are a potential threat to the remaining less disturbed upland areas (Grimmett and Jones, 1989). In certain regions (sea-coasts and mountains), as a result of urbanisation, road construction and increase in motor traffic and access to sites, there have been increases in the number of visitors to protected areas. Nature trails are popular and are being constructed first of all in protected areas. Threats arise partly from the lack of suffi-

ciently severe penalties, or from the non-application of governmental decrees. Cattle grazing is still allowed in some nature reserves and poaching (hunting/fishing) continues to be prevalent in others.

## ADDRESSES

- *Komitet za opazvane na prirodната sreda* (Committee for Environmental Protection) 1000 Sofia, ul. Trialitza 2. Tel: 71 91 38. Telex: 22145 BANSF.
- Institute of Ecology, Academy of Science, ul Garagin 2, 1113 Sofia. Tel. 70 54 98. Telefax: 80 34 18.

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**DATE** March 1987; reviewed October 1990

## **COUNTRY: Czech and Slovak Federative Republic**

**AREA** 127,870 km<sup>2</sup> (78,860km<sup>2</sup> of the Czech Republic and 49,010km<sup>2</sup> of the Slovak Republic)

**POPULATION** 15,600,000 (mid-1989 estimate) Natural Increase 0.2% per annum

**GNP** US\$ 9,472 per capita (Anon., 1990)

### **POLICY AND LEGISLATION**

The relevant section of the Constitution, relating to protected areas, is the Law No. 100/1960, Article 15. The first conservation of nature acts were introduced in the years 1955 and 1956.

The two republics have separate laws dealing with conservation: the State Nature Conservancy Act of 1955 - Law No. 1/SNR 1955 for the Slovak Republic, and the State Nature Conservancy Act of 1956 - Law No. 40/1956, for the Czech Republic. In 1986 the Czech and Slovak national councils enacted Laws No. 65/1986 and No. 72/1986 respectively, to impose penalties for offences against the State Nature Conservancy decrees of 1956. Republic acts are brought together and integrated by Federal legislation. In June 1990 a Commission for the Environment was set up at the federal level. The integration of natural resource conservation with economic activities is dealt with by sectors such as forests, water management, agriculture, mineral surveys, mining, industrial production and construction.

The State Nature Conservancy Acts at republic level define nature conservation as the preservation, renewal, enhancement and use of natural wealth and the special protection of important areas and natural features. These laws are supplemented by separate republic guidelines issued in 1978 and 1980 dealing with nature conservation development. The overall objective is to integrate conservation and use of natural resources and to apply principles of ecosystem conservation.

Protected areas were established under the 1955 and 1956 Acts by the respective Ministries of Culture. The Ministries of Culture decided on the establishment of all protected area categories with the exception of national parks which were also established under the 1955 and 1956 Acts by decrees of the Czech and Slovak National Councils. Regional National Committees give guidance to the District National Committees which are responsible for nature conservation, protected areas and the establishment of protected

natural features and monuments at the district level (Marsakova and Skrivanek, 1982). There are three main categories of protected areas:-

*Narodni parky* (national park): these are defined as areas with very valuable natural resource, influenced little by human activity, with great climatic, health and recreational importance. National parks have complete protection, except for some forest exploitation which is strictly controlled. The parks are zoned with a 'controlled area' for recreational development which includes villages, holiday homes, sanatoria, camp sites and other facilities. Hunting is prohibited. National parks are fully open to visitors with the exception of access to strict nature reserves within the park. Tourism is regarded as a main objective of national parks.

*Chranene Krajinne Oblasti (CHKO)* (protected landscape areas): these are areas of lower natural values but with significant scenic and aesthetic qualities, they represent the harmonious interaction between natural components and traditional human activities. They aim to protect all values and typical features of the landscape and encourage the rational use of natural resources (Povolny, 1986). They are also used extensively for recreation (IUCN, 1971). Within CHKOs the most valuable parts are strictly protected as nature reserves or natural features. Although they are not excluded from further exploitation, all economic activities are carried out in accordance with the understanding of the republic-level nature conservation bodies. Projects dealing with water management, forest management, agriculture, industry, transportation, building, tourism and recreation, as well as exploitative activities such as mining, must be conducted in accordance with goals of the protected area and accordingly territorial planning is conducted, discussed and revised to be in line with this (Marsakova and Skrivanek, 1982). All CHKOs in the Slovak Republic have buffer zones (Wiltowski, 1979).

*Statni Prirodni Rezervace (SPR)* (national nature reserves): these are areas where the complete ecosystem is subject to conservation management (Marsakova and Skrivanek, 1982) and are strictly protected areas of great scientific and research importance (IUCN, 1971).

A further five categories of protected areas are also used :-

*Chranene Studijni Plochy (CHSP)* (protected study areas): are small protected sites designated for research and teaching purposes.

*Chranene Prirodne Vytvory Krasove Javy (CHPV)* (protected natural features): are geological features, especially karst areas, as well as individual monumental trees.

*Chranene Parky a Zahrady (CHPZ)* (protected park or gardens): historic parks protected under the Cultural Monument Act.

*Protected Habitats:* these are sites in which the occurrence of one or more plant or animal species are subject to preservation.

*Chránené Nalezisté* (protected natural monuments): these are natural features documenting human activities or associated with historical events.

## **INTERNATIONAL ACTIVITIES**

The Ramsar Convention was acceded to on 2nd July 1990; eight sites have been designated. Six sites, covering 364,170ha, were registered as Biosphere Reserves by UNESCO by 1990. The World Heritage Convention was signed in 1990 and tentative lists of sites for nomination are in the process of being drawn up in both Czech and Slovak republics.

## **ADMINISTRATION AND MANAGEMENT**

In 1940 the Trust for Enhancement and Protection of Native Country was founded in Prague. The State Institute for Protection of Monuments and Conservation of Nature was established in Prague in 1958.

The administration of protected areas was the responsibility of the respective Ministry of Culture in each republic, with the central conservation authority within these Ministries being the Department for Nature Conservation. From 1988 a new Ministry of Interior and Environment was established in each republic. This was the central authority for the management of the environment, as well as for co-ordinating and controlling environmental functions of other ministries.

In June 1990 a federal level State Commission for the Environment was set up, headed by the Federal Environment Minister. There are four departments: legislation and landscape planning, policy, projects and international cooperation. At the republic level a Czech Ministry was established by act of the National Assembly No 173/1989 and was defined as the highest state control authority in environmental protection. It is responsible for water, air and nature protection as well as land protection aspects of agriculture and forestry and mineral resource protection. A Slovak Commission was established by act of the Slovak national assembly, No 96/1990 in March 1990. It has authority to carry out administration of nature conservation, but not forestry, land use and mineral resource issues. The republican ministries will concentrate on executive and inspection functions, while the federal commission will concentrate on forward planning and strategy. A 13-member Federal Committee for the Environment, headed by the Federal Environment Minister, was also set up in 1990 which meets regularly to discuss environmental matters (Fisher, 1990).

At the federal level, the environment was controlled by the State committee for scientific, technical and investment development (*Stani Komise Provedecky, Technicky a Investicni Rezvej*) acting through the Czech Centre for State Protection of Monuments and Nature Conservation (*Ustredi statni pamatkove pece a ochrany prirody SUPPOP*) and the Slovak Centre for State Nature Conservation (*Ustredie statnej ochrany prirody USOP*) (Cerovsky, 1988). Before 1990 there were eleven Regional Centres for Protection of Monuments and Conservation of Nature which had representatives present from the nature protection departments (IUCN, 1971). A Council for Environment acted as an advisory and consultative body for both republics and dealt with the key problems of natural resource conservation (Marsakova and Skrivanek, 1982; Cerovsky, 1988). A key exercise was the preparation and revision every ten years of a special planning document, the 'territorial project of nature conservation' which was elaborated for all national parks and protected landscape areas (Povolny, 1986; Cerovsky, 1988).

From 1990, the SUPPOP was restructured as the Czech Institute for Nature Conservation *Cesky Ustav Ochrany Prirody* (CUOP) with an equivalent Slovak Institute for Nature Conservation *Slovensky Ustav Ochrany Prirody* (SUOP) replacing USOP. The main aim of the two institutes continues to be the selection, management and use of protected natural components. They are also likely to continue to carry out wide-ranging research on threats to protected areas, monitoring and basic inventory work for each protected area and prepare management plans (Marsakova and Skrivanek, 1982).

The Ministry of Forest and Water Management and Timber Industry is responsible for water and atmospheric conservation, pollution control, forest management and conservation. In the Czech Republic, respective District National Committees declare, in accordance with territorial plans, 'quiet areas' where motor vehicles, camping and other recreational activities are prohibited.

The administration and management of the national parks tend to vary from site to site. For example, the High Tatra National Park is under the direct responsibility of the Slovak Ministry of Forest and Water Management, while the authority which runs this park is also responsible for the running of the Pieninsky National Park. The Krkonosze National Park is subordinate to the East-Bohemian Regional National Committee. Many of the frontier national parks and protected areas are organized on a bilateral basis.

Protected Landscape Areas (CHKOs) are administered by separate offices for each area which deal directly with the local and regional authorities (Wiltowski, 1979, Karpowicz, *pers. comm.* 1990). They employ an average of four to ten professional staff, who are principally involved in planning, management, monitoring and educational work. Research in CHKO is conducted by the Academies of Science or by the Research Institutes of the competent ministry. In the Czech republic CHKO are likely to be supervised by the Institute for Nature Conservation (J. Cerovsky, 1990, *pers. comm.*). In the Slovak Republic,

CHKO's are administered by the Slovak Institute for Nature Conservation.

In 1969 the Slovak Union of Nature and Landscape Conservationists (*Slovenský svaz ochrancov prírody a krajiny*) (SZOPK) was founded with 14,000 individual members, over 400 collective members, 260 local groups and more than 600 youth groups with 11,000 members; and the Czech Union of Nature Conservationists (*Cesky svaz ochrancu prírody*) (CSOP) was founded ten years later in 1979 with 24,000 individuals, over 350 collective members and 768 local groups (Cerovsky, 1988).

## SYSTEMS REVIEWS

Most of the Slovak Republic is mountainous as are the northern and southern boundaries of the Czech. Agricultural land covers 69,000km<sup>2</sup> (54% of the land surface): 48,000km<sup>2</sup> of this are arable, 8,000km<sup>2</sup> are meadow and 8,000km<sup>2</sup> are pasture. Much of the remaining area of the country is covered by forest, with broad-leaved deciduous forest (and extensively reafforested areas of *Picea* and *Pinus*) at lower altitudes, giving way to mixed coniferous and deciduous woodland at higher altitudes, and *Pinus* in subalpine zones. The forests, particularly in the northwest are among the worst affected by air pollution in Europe. In warmer areas, close to the Hungarian border, there are remains of steppe-woodland and steppe-grassland vegetation (Grimmett and Jones, 1989).

Land is in the most part under state ownership, but where private enclaves occur in protected areas the owners are obliged to conform to legal requirements.

On the basis of the document *The Environment in Czechoslovakia* (Vavrousek, 1990) in June 1990 a 'Draft concept of state ecological policy' was produced (Vavrousek *et al.*, 1990a) which described future potential policy directions. This was followed in July 1990 by the document *Ecological Programmes and Projects, Czech and Slovak Federative Republic* (Vavrousek *et al.*, 1990b) which added the details to the policy and described specific objectives including the development of national and international parks.

Major environmental threats are from acid precipitation and agricultural mechanisation. The Czech Ministry of Environment, through its state nature conservation bodies, has an advisory input to discussions regarding state and republic plans, agricultural and water management and energy projects and all types of physical planning. In response to environmental crises a national plan - 'the eco-programme' - was being developed, aimed at integrating ecology and economic activities (Cerovsky, 1986). A national conservation strategy was also being prepared and contains a Species Preservation Strategy for the Czech Republic.

Total protected area is given as 10,869km<sup>2</sup> in the Czech Republic (13.8%) and 8,163km<sup>2</sup> in the Slovak Republic (16.7%) Cerovsky, 1988).

The first recorded establishment of protected areas was in 1838 when two forest reserves were created in south Bohemia, followed by additional reserves in 1858 and 1884. An ordinance giving protection to natural monuments was decreed in Slovakia in 1900. The first national park was created in the mountainous High Tatras in 1948, and the first protected landscape area (Cesky raj) in 1955. A plan for the development of the protected area network to the year 1990 envisages an increased area of 490,000ha or an addition of 10% to the surface area (Wiltowski, 1979).

#### **OTHER RELEVANT INFORMATION**

Special governmental decisions were passed in 1976 and 1978 regarding environmental education which was to be promoted in both republics, at all levels. Some universities offer courses on 'Protection of the Natural Environment'. Selected protected areas are used very extensively for educational purposes and have visitor centres and nature trails. In the Slovak Republic a conservation training centre operates in Gbelany near Zilina and in the Czech Republic there is an establishment in the Krkonose National Park. The Centre for Nature Conservation Development in Bratislava has since 1982 published *Chranene uzemia Slovenska-spravodajca* a yearbook on protected areas in Slovakia.

#### **ADDRESSES**

##### *Federal*

- Federal Committee for the Environment, Slezska 9, 120 29 Praha 2. Tel. 256488. Fax. 2152659. Telex. 121427.

##### *Czech Republic:*

- Ministerstvo Zivotniko Prostredi (Ministry of Environment CR) Lazarska 7, CS-110 00 Praha 1. Tel: 731357.
- Cesky Ustav Ochrany Prirody Valdstejske nam e 1, 11800 Praha 1. Tel. 513 1 770.

##### *Slovak Republic:*

- Commission of the Environment 031 01 Liptovsky Mikulas ulica 1. maja 43.
- Institute for Nature Conservation 031 01 Liptovsky Mikulas ulica 1. maja 43.

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**DATE** March 1987; reviewed October 1990

## COUNTRY: The Eastern Länder of the Federal Republic of Germany (FRG)

formerly the German Democratic Republic (GDR). The reinstated Länder, superceded in July 1952 by the Bezirks system, are: Brandenburg, Mecklenburg, Saxony, Saxony-Anhalt and Thuringia (Sword 1990).

AREA 107,860km<sup>2</sup>

POPULATION 16,766,000 (UN 1985) Natural Increase 0.1% per annum  
16,600,000 (1989 estimate)

GNP US\$ 11,754 per capita

### POLICY AND LEGISLATION: GDR

The relevant sections of the East German constitution are Article No. 15, Item (1) and (2) (Cеровsky, 1988). The first law on Conservation of Nature was enacted in 1935. In 1954 the Conservation and Care of Native Nature came into force, to be replaced on 14 May 1970 by the first comprehensive environmental law - the *Landeskultugesetz* (Culture of Country Act, full title 'Planned Creation of the Socialist Country Culture in the German Democratic Republic'). As a consequence of this basic document on area protection, an ordinance covering species protection linked to habitat conservation (flora and fauna) was passed in October 1984.

Measures enacted by the 'post-revolution' government were aimed at preserving ecologically intact and unique habitats and supporting programmes for protection of endangered plant and animal species (Steinberg, 1990).

Up until November 1989 there were three categories of protected area:

*Naturschutzgebiet, NSG* (Natural Nature Reserve or Protected Area): areas established for the protection of a wide variety of species and ecotypes. Management was geared to nature conservation, although some rural land-use was allowed. Up to 6.7% of the total NSG area consisted of strict reserves purely for nature conservation.

*Landschaftschutzgebiet, LSG* (Landscape Protected Area or Reserve): areas estab-

lished primarily for the protection of rural and scenic landscapes including geological features. Forest management and agricultural use occur throughout the designated LSGs (Cerovsky, 1986).

*Flächennaturdenkmäler* (Natural Monuments): are natural elements, such as geological features, ancient trees or natural objects often associated with historical events. They are classed as *Naturdenkmäler* (ND) if single natural objects or *Flächennaturdenkmäler* (FND) if a small area no greater than 3ha (Cerovsky, 1988).

#### **POLICY AND LEGISLATION: FRG**

Constitutionally a federal republic; the protected area categories, establishment procedures and responsibilities for nature conservation being defined in the nature conservation legislation at the province level (länder).

However, there are general legislative provisions for conservation such as the Federal Law on Nature Conservation (1976) which specifies Länder landscape programmes, regional landscape development plans, local landscape plans and their respective contents. General measures are set out for the protection, maintenance and development of nature and landscape. These measures also define which general activities and land uses are considered to be in conflict with nature and landscape. The Länder have adopted their legislation on nature conservation and physical planning in conformity with this Act (Holzner, 1986).

At present, existing or potential areas of nature or landscape interests are identified in the regional plans. These plans are based on complex negotiations sometimes lasting up to ten years or more between public authorities, institutions, interest groups and experts; they are led by the regional planning agencies attached to the Länder governments who act for the county planning associations, the members of which are the district and local authorities. The plans are enacted by Länder government orders. National parks and nature parks are established by the Länder; large-scale nature or landscape conservation areas by the counties; smaller ones by the districts. The conservation orders describe the site and its demarcation, and the reasons for its designation; they contain a set of prohibitions and list the activities for which permission is required and for which exceptions are granted. Depending on the type of conservation area, there are various restrictions on agriculture. These may preclude drainage, removal of landscape features, intensification, the construction of buildings or other permanent facilities, fencing and so on. Usually there are no compensation payments, but there may be grants for active conservation works.

There are five main types of protected areas: national parks, nature reserves, natural monuments/sites, protected landscapes and nature parks. Creation of reserves under the Nature Conservation Law does not exclude hunting and separate declarations of controlled

hunting areas or non-hunting areas must be made under the Hunting Laws (Holzner, 1986). Apart from the different categories based on the legal provisions in the field of nature conservation, the forest administration of the Länder has designated small natural forest reserves and natural forest units. No silviculture takes place in these areas (Ertz, 1979).

#### **INTERNATIONAL ACTIVITIES: GDR**

The instrument of the Ramsar Convention was deposited on 31 July 1978 with a total of eight sites designated. Under the Unesco MAB programme two sites were declared biosphere reserves in 1979, with six more proposed in September 1990. The GDR ratified the World Heritage Convention on 12 December 1988 but no natural sites have been designated.

The Society for Nature and Environment is a member organization of IUCN and of the East-Europe IUCN Commission on Education. The GDR also participated in the environmental activities of Unesco, UNEP and CMEA.

#### **INTERNATIONAL ACTIVITIES: FRG**

The Ramsar Convention was ratified on 26 February 1976, with to date 21 sites designated. The World Heritage Convention was signed on 23 August 1976, no natural sites are listed as yet. One Biosphere Reserve was designated in 1981.

#### **ADMINISTRATION AND MANAGEMENT**

##### *Pre WWII Germany*

In 1904, the first set of objectives and tasks for the care of natural monuments was formulated and in 1906 the first government nature conservation authority, the Prussian (later Central German) Board for Care for Natural Monuments, was established in Berlin (Cerovsky, 1988).

##### *GDR*

The supreme authority for nature conservation, including protected areas, was the Ministry of Agriculture, Forest Management and Food, with the regional authorities being the Regional Councils' Forest Management Departments in all 15 Bezirke. Research and advice was provided by the *Institut für Landschaftsforschung und Naturschutz*, (Institute for Landscape Survey and Nature Conservation of the Academy of Agricultural Sciences) cre-

ated in 1953 with five regional branches at Dresden, Greifswald, Halle, Jena and Potsdam. The state nature conservation bodies often actively cooperated with voluntary bodies in programmes of species protection (Cеровsky, 1988).

In late 1989 a Ministry of Environment was created, to be replaced in 1990 by a Ministry for the Environment, Nature Conservation, Energy and Nuclear Safety. The change in structure also saw an increase in staffing levels (just 20 in 1989).

In 1904 the *Bund Deutscher Heimatschutz* (German Trust for Protection of the Native Country) was founded and continued to exist (in Saxony only) until the end of World War II. Other voluntary organizations include the *Gesellschaft für Natur und Umwelt im Kulturbund der DDR* (the Society for Nature and Environment in the Cultural Union of GDR) founded in 1980 and with 60,000 members. The modern ecological parties, such as the Green Party and Alliance 90, all have an interest in protected areas as a general element in preserving the environment.

Although the protected areas system of East Germany was extensive many sites have been degraded through use for military and economic purposes. The country is also littered with waste dumps and has one of the highest sulphur dioxide emissions in the world, these factors adding additional stress to the network of areas.

## *FRG*

At the federal level the Department of Nature Protection, Environment and Health within the Ministry of Environment, Nature Protection and Nuclear Safety, is responsible for administration of nature conservation together with scientific and technical agencies. Nearly all nature reserves are established on private land and in most some form of land use continues. Relatively few sites (mostly bird reserves) have staff specifically employed for nature conservation purposes, their expenses tend to be paid from a general budget. The administration and management of nature reserves is the responsibility of the Councils for Nature Conservation and Landscape Management which work at local, district, Länder and federal administrative levels, advising the authorities concerned. National parks are administered by park authorities responsible to their respective Länder governments. The Federal Institute for Vegetation Research, Nature Conservation and Landscape Management with its Department of Nature Conservation is responsible for research and provision of advice to federal bodies.

A number of non-governmental organisations also own nature reserves, or parts of nature reserves, or have taken over management or wardening of reserves (especially bird reserves) (Ant and Engelke, 1973; Erzt, 1979; Holzner, 1986).

## SYSTEMS REVIEWS: GDR

Mostly an agricultural landscape. To the north, oak *Quercus* spp., beech *Fagus sylvatica*, and pine *Pinus* spp., comprise the main woodland cover, much of this having been replaced by conifer plantations. In the south there is a vertical zonation of oak and hornbeam *Carpinus betulus* forest which gives way to montane beech forests. Above 500m there are forests of beech, fir and spruce (Davis *et al.* 1986). Forests cover 29,500km<sup>2</sup> (27% of the country). Threats to the environment are largely from industrial and agricultural development.

The first protected site in the Eastern Länder area was established in 1852 at 'Teufelsmauer' (Devil's Wall) near Quedlinburg, followed in 1886 by the bird protection station at Seebach near Mulhasen (Cerovsky, 1988).

Total area protected is 2,068,000ha which is more than 19% of the surface area of the country, classified as 766 natural protected areas and covering 104,000ha (of which 6,980ha were strict reserves); 404 landscape protected areas, covering 1,964,000ha; and 9,500 natural monuments, covering over 4,000ha (Cerovsky, 1988). In September 1990 the first five national parks were designated, along with a proposal for six new Biosphere Reserves and 3 sites under a new designation of nature parks (Anon., 1990).

The 'post-revolution' government planned to set aside 10% of the nation's area for nature protection, utilising those lands previously used by the military and the former leadership. On 12 September 1990, five national parks, three nature parks, and 6 Biosphere Reserves were designated by the Volkskammer (GDR parliament). However it is the Bundesländer who will complete the designations (Anon 1990).

## ADDRESSES

### GDR

- Ministerium für Land-, Forst-und Nahrungsgüterwirtschaft, Hauptteilung Forstwirtschaft, Sektor Zagd/Landeskultur (Ministry of Agriculture, Forest Management and Food. Department of Forestry, Hunting and Land Cultivation Section), Köpenicker Allee 39-57, DDR-1157 Berlin.

### FRG

- Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Abteilung Naturschutz, Umwelt und Gesundheit, Postfach 12 06 29, 5300 Bonn 1.

(Each of the Länder has additional authorities for nature conservation)

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**SPECIAL NOTES**

It is not often that a country dissolves peaceably to become part of another state. However, in the case of the German Democratic Republic exactly this has happened. At midnight on the 3 October 1990 the two Germanies, divided since the Second World War, unified. Previous to this date monetary union had occurred and, of direct relevance to protected areas, legal precedence rested with the laws of the Federal Republic. It is yet to be seen how this legal union will affect the protected area system of these Eastern Länder, and what protection the previous legislation will give until rationalization of the new system. Due to the uncertainties inherent in the unification process both sets of legislation have been included, marking the historical and future growth in area protection.

**DATE** December 1986; reviewed January 1989; reviewed October 1990

## COUNTRY: The Republic of Hungary

AREA 93,032km<sup>2</sup>

POPULATION 10,600,000 (mid-1989 estimate) Natural increase -0.2%

GNP US\$ 2,240 per capita

### POLICY AND LEGISLATION

The first legal measure on environmental management and protection was the Hungarian Forest Act which came into force in 1879 (then part of the Austro-Hungarian Empire). The Forests and Nature Conservation Act (Act IV/1935) was the first comprehensive act on nature conservation and laid the foundation for the preservation of scientifically valuable areas, wildlife communities, natural features and species. The 1935 Act was subsequently updated after World War II due to fundamental changes in the social and economic conditions and increasing awareness of nature conservation. The most important of these steps for improving nature protection was an ordinance adopted in Law, decree No. 18/1961 (updated in 1971). The Nature Conservation Act (1961) made provisions for a national supreme body for the management of nature conservation, this role is currently filled by the Ministry for Environment and Regional Development (*Környezetvédelmi Ministerium*). In 1972 a special governmental decree was enacted which enabled the establishment of national parks, with the first created at Hortobágy in 1973. The increased need for stronger enforcement and nature conservation control led to the Environmental Act II - an Act on the Protection of Human Environment, which was endorsed by Parliament in 1976. It was the first legislative act to provide the comprehensive protection for the whole range of the environment, synthesising all earlier legislation.

Nature conservation legislation was based on the Bill No. IV of 1982 and the Cabinet Decree No. 8/1982 on Conservation of Nature. These were introduced by the National Authority for Nature Conservation and they supercede all former acts on nature conservation. The basic objectives included: the assessment of natural assets and the declaration of protected areas; the determination of methods for maintaining areas under protection (balancing nature conservation operations with economic activities); acquiring ownership rights for protected areas, most notably those sites endangered by economic activities, and the protection and management of nature reserves.

Protected Areas appear to be designated at the national or local level, according to their degree of importance. Those of national (and in some cases international) importance are National Parks, Landscape Protection Areas and Nature Conservation Areas. In addition, caves form a special category and all caves are under national protection. Sites of local importance are placed in two categories: County Nature Protection Areas and Natural Monuments. For certain special biotopes of some rare species, areas of intensive protection are defined within protected areas. They are only used for scientific research and are closed to the public (92 caves also receive this special protection) (Szilassy, 1989).

Definitions of the national protected areas are as follows:

*Nemzeti Park* (National parks) are large areas of land essentially of an unchanged natural state, where the landscape, fauna, flora or geological formations are of outstanding national importance. These areas are of value for public education and recreation. Zonation ensures that strictly protected areas exist where nature conservation is the prime management objective.

*Tajvedelmi Korzetek* (Landscape Protection Areas) are large areas of special scenic value that are protected to safeguard and maintain nature conservation values as well as landscape features. Protection of these areas extends to natural landscapes, regions and objects whose preservation and maintenance is of importance for science, culture or other public interest.

*Termes Zetvedelmi Terulet* (Nature Conservation Areas) established to preserve and maintain small areas of importance for nature conservation. They are divided into two categories: those of national significance and those of local importance, the latter being declared by county councils only (Tolgyesi, 1984). Under this category the Nature Conservation Act has guaranteed the protection of all caves (*Fokozottan Vedett Barlang - Protected Caves*) since 1961.

Conservation legislation also provides for *in situ* protection of important fauna and flora resources. The safeguarding of habitats of the most valued protected species is one of the primary objectives for the designation of protected areas. More than 90% of the total number of vascular plant species, and 100% of the protected animal species benefit from *in situ* protected area designation (ECE Finland, 1986). Legislation states that it is forbidden to destroy, damage or change the character of natural landscapes, areas and objects declared protected. Utilisation of agricultural lands in declared protected areas can only be ensured in conformity with the category of protection, except in strictly protected areas where agricultural land may be withdrawn from use in the interest of nature conservation (Kallay *et al*, 1987).

## INTERNATIONAL ACTIVITIES

Bill No. IV of 1982 on Conservation of Nature stated that nature conservation should be incorporated within the framework of international conventions and protocols. Hungary acceded to the Ramsar wetland convention on 11 April 1979; thirteen sites were listed in 1989. It was accepted as part of the World Heritage Convention in July 1985; no natural sites have yet been inscribed. Five sites covering 128,000ha have so far been registered as biosphere reserves by Unesco (1982), two of these are bilateral: Aggtelek with Czechoslovakia and Ferto-to with Austria.

## ADMINISTRATION AND MANAGEMENT

The first nature protection authority, the National Nature Preservation Council, was founded in 1939 under the auspices of the Ministry of Agriculture. It was replaced in 1961 by the National Authority for Nature Protection, an independent authority acting directly under the Cabinet. In 1977 this authority extended its power to cover co-ordination and supervision of nature and the protection of environment and it was renamed the National Authority for Environment Protection and Nature Conservation (*Országos Környezet és Természetvédelmi Hivatal*, OKTH). Under the provisions of the 1982 Cabinet Decree, administrative tasks, supervision, co-ordination and control of nature conservation activities were the duties of the President of OKTH. On 1 January, 1988, the OKTH was merged with the National Office of Water Management to establish the Ministry for Environmental Protection and Water Management (*KVM - Környezetvédelmi és Vízgazdalkodási Ministerium*). This was subsequently replaced by the Ministry of the Environment and Regional Development (*Környezetvédelmi Ministerium*).

The KVM had a network of twelve regional directorates, as well as four directorates for National Parks. The Ministry embodied 17 separate technical or operational units among which are those for air protection, water protection, river regulation and nature preservation. At the national level KVM had eight departments including the department of nature conservation, which was divided into four constituent parts including the division of landscape protection. The latter had seven inspectorates which actually carry out management. The National Parks are managed by their own directorates. Aspects of the environment still remain under the control of other senior authorities: the Ministry of Agriculture and Food supervises the conservation of soils and forests as well as the protection of landscape not declared on nature conservation grounds. The Ministry for construction and Town Development deals with the urban environment, and the Ministry for Industry and its Central Authority for Geology protects mineral resources. Through the network of regional directorates the KVM supervised and controlled nature conservation activities such as the organisation and promotion of scientific research and law enforcement in protected areas.

At the local level tasks within the regional responsibility of the KVM were carried out jointly by its local organisations, the inspectorates for environment protection and nature conservation and the national park directorates. The inspectorates are responsible for the management of areas of national importance whilst the national park directorates manage their specific areas. They employ nature conservancy guards to safeguard and prevent damage of protected areas (National Authority for Environment Protection and Nature Conservation, 1983, 1984). County committees for environmental protection and nature conservation act as advisory and controlling bodies, their work includes maintenance of protected areas. They report to central authorities.

Although the democratic elections held in April 1990 have resulted in a reorganisation of the KVM, the new Ministry of the Environment and Regional Development will have a similar *modus operandi*.

Between 1976-1980 0.5 billion forints (out of a total environment budget of 41.2 billion forints) were spent on nature conservation and landscape protection (Sasvari, 1982; Cerovsky, 1988). The KVM spent approximately 400 million forints annually on environmental protection research in the Institutes of the Academy of sciences and other institutions of higher education (Szilassy, 1989).

Of the numerous non-governmental organisations, the traditional hunting, fishing and animal protection societies are particularly active in the field of conservation. The Hungarian Ornithological Society, founded in 1974 is the largest voluntary organisation, with about 10,000 members and the ownership of one protected area. There are various voluntary national park friendship circles (with members being drawn into park management), such as the Friends of Bukk National Park, which grew into the Environmental Protection Association of the County of Borsod. The Speleological Institute supervises the protection of Hungary's caves (IUCN, 1988).

## **SYSTEMS REVIEWS**

The majority of Hungary is lowland, bisected by the Rivers Danube and Tisza. There are low mountains in the north, reaching a maximum altitude of 1015m. Protected areas include examples of the four main natural vegetation types: a) mountain bog on peat; b) mountain meadows, also containing important alpine flora; c) steppe or *puszta*; and d) broadleaved and coniferous woodland. Other protected habitats include lakes (Lake Balaton is the largest lake in central Europe and an important bird migration area), soda lakes, volcanic mountains and extensive cave systems. The climax vegetation of the Great Hungarian Plain was steppe-woodland, dominated by *Quercus* but most of this was removed during the sixteenth and seventeenth century and has been replaced by steppe-grassland (*puszta*), an alkaline and very saline grassland rich in annuals (Grimmett and Jones, 1989;

Davis *et al.*, 1986).

Hungary is densely populated with an agriculturally dominated economy. Forests still cover 17% of the land (increased from 12.4% in 1945), while meadows cover 5.4% and arable and grazing land covers 67.7% (Cerovsky, 1986; Grimmett and Jones, 1989).

The first protected area was the Forest of Debrecen, which was designated in 1939. By 1970 the total protected areas system covered only 15,000ha. In less than ten years from 1970 the protected areas system was increased to exceed 400,000ha. By the end of 1987 protected areas covered 550,000ha, or approximately 5.9% of the country (Szilassy, 1989).

The puszta steppes are threatened by agricultural intensification, rice crop production and most recently by land use and ownership changes. Other major threats and problems include soil erosion, threats of floods and the proposed Gabčíkova/Nagymaros Danube river barrrage system (GNRBS) which threatened to disrupt water levels along the Danube. Work on this project has been halted on the Hungarian side since May 1989. The Soviet Army has been accused of using some territory within national parks for firing ranges and ammunition dumps.

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DATE August 1988; reviewed October 1990

## COUNTRY: Republic of Poland

AREA 312,683km<sup>2</sup>

POPULATION 38,200,000      Natural Increase 0.6% per annum

GNP US\$ 1,974 per capita

### POLICY AND LEGISLATION

The protection of specific natural objects is covered by a number of legislative acts starting with the decree of 1918, followed by the government ordinances of 1919 (Monitor Polski Nr. 208, poz. 2) and 1925, and culminating in the laws of 1934 (Dz.U.R.P. nr. 31, poz. 274 *Ustawa o ochronie przyrody*) and 1949 (Nr. 25, poz. 180. *Ustawa o ochronie przyrody*), the last amended in 1972 (Amendment nr. 49 poz. 317) and in 1975 (Amendment nr. 17, poz. 94). The National Constitution of 1952 includes sections dealing with nature conservation (Article 8) and the protection and rational development of the natural environment (Article 12, Section 2). The Law on Nature Conservation of 7 April 1949 governs the organisation of nature conservation in general and introduced three protected area categories: national parks, nature reserves and natural monuments. This law governs the creation, administration and management of these three types of area. Two further types of protected area, landscape parks and areas of protected landscape, began to be created in the 1970s. The Law of 1980 concerning Protection and Management of the Environment (*Ustawa o ochronie i kształtowaniu środowiska*, Dz.U. Nr. 3, poz.6; zm.: DZ.U. z 1983 r., Nr.44, poz.201) regulates all problems connected with landscape protection. This is a general act, passed in January 1981, to regulate natural resource use in the national planning context and to control pollution levels and apply protection of the landscape in general terms.

In 1979 the State Council for Nature Conservation (*Panstwowa Rada Ochrony Przyrody*) (PROP) and the Department of Nature Protection in the former Ministry of Forestry prepared an outline draft of a new Nature Protection Law. This project, discussed over a number of years, dealt with conservation of nature separately to the Law on Conservation of the Environment. One of the aims of the project was to adjust the legislation to requirements of the International Union for Conservation of Nature (IUCN) and especially to the World Conservation Strategy. However, the project was discontinued and the new draft law was not passed. Attempts were also made to link the law of 1949 on nature protection with the law of 1980 on environmental conservation into one unified text

and simultaneously to redraft the individual laws.

The new administration in 1990 is preparing a new framework law covering all aspects of environmental protection which is to be presented to Parliament by the end of the year. Sector laws will then be developed.

The four protected area classifications are:-

*Park narodowy* (national park): the law on Nature Protection of 1934 (Article 9) defines these as 'especially beautiful landscape, rich in natural values ... for areas not less than 300 hectares'. Current legislation defines national parks as areas over 500ha protected for their unique natural values, for their floral and faunal components and their overall landscape features. They were until 1989 created by decree of the Council of Ministers based on the recommendations of the Ministry for Conservation of the Environment and Natural Resources (*Ministerstwo Ochrony Środowiska; Zasobów Naturalnych*) and expert advice from the State Council for Nature Conservation (PROP). In practice, areas proposed for conservation as national parks should be over 1,000ha. They are zoned into strict protection areas and partial protection areas, the former excluding all human activity, the latter allowing active conservation management of selected elements. Additionally, several national parks have buffer zones designated around them. Each national park has its own administration, with a director in charge and between 15-30 supporting staff, with 1-2 individuals employed as scientific workers. Each national park is obliged to have detailed activity plans, such as a reserve management plan, a forest management plan, a scientific management plan and a spatial Management Plan (the latter is compulsory according to the 1949 law). Moreover, a scientific council, composed of specialists representing different branches of science, is appointed as an advisory body for each park. Within most national parks, natural museums containing specimens of nature typical for the protected area, used for educational purposes, are established.

Where any proposed developments are likely to damage designated areas, the state authorities are obliged to seek the advice of the State Council for Nature Conservation and to inform the Ministry for Conservation of the Environment and Natural Resources of such actions.

*Rezerwat przyrody* (nature reserve): these are areas of various sizes (mostly less than 100ha) divided for management purposes into strict (fully protected) reserves and partial (partially protected) reserves. The former are used exclusively for research, the latter are subjected to controlled management activities. Most areas belong to the second group and many are mixed, with strict and partial protection of respective parts. Reserves are created under the 1949 law by decree of the Ministry for Conservation of the Environment and Natural Resources. Proposals for the creation of reserves are submitted to the Ministry by the Voivodship Conservator of Nature (*Wojewodski Konservator Przyrody*) who is responsible for the management of this type of protected area. They are classified into nine basic

types according to the main object of protection: forest reserves, floristic reserves, steppe vegetation reserves, halophytic reserves, peatbog reserves, water reserves, faunal reserves, inanimate nature and landscape reserves. They are administered by the forestry authorities in the sub-forest district in which they occur while ten-year management plans are prepared by the Voivodship Conservator for Nature.

*Park krajobrazowy* (landscape park) also termed *parki natury* (nature park): this category combines nature conservation with the needs of recreation and tourism. They represent 'areas of exceptional natural values, ... with a predominance of natural landscape ... regarded as non-intervention zones for the development of industry and urban agglomerations and for large recreation centres'. These areas are created by regional authority (Voivodship People's Council) decrees under the 1980 law but only a few have their own administration. A spatial management plan is required which defines tourist carrying capacities, forestry and agricultural exploitation, industrial development and urban construction. A number of nature reserves and natural monuments can usually be found within landscape parks. Often a 'protective belt' is planned around them, mostly surrounded by a further area of protected landscape. A coordinating committee, appointed by the regional chief executive (*voivoda*), enforces the orders, restrictions and prohibitions and works within the limits of the spatial management plan for the region.

*Obszar chronionego krajobrazu* (area of protected landscape): these are also established under the 1980 Law by decision of regional authorities. They are more extensive territories than landscape parks and contain landscape features characteristic of a given region, often with cultural features as well, and are envisaged as major areas for recreation and tourism development. Economic activities (agriculture, forestry, industry) are not subject to serious limitations, but have to conform to certain standards. The areas are delimited in spatial management plans and included in regional voivodship plans. They are created and administered by the voivodship authorities, represented by the Conservator of Nature.

*Pomnik przyrody* (natural monument) may also be included in protected areas. They are mostly single objects such as large trees, old alleys, cliffs, erratic blocks and rock outcrops. They are declared under the 1949 law by the voivodship authorities and protected by the voivodship Conservator of Nature on all natural monuments against any activity which would change their status. Special documentation on all natural monuments is provided by each region.

## INTERNATIONAL ACTIVITIES

The World Heritage Convention was ratified in June 1976 with one natural site designated. The Convention on Wetlands of International Importance Especially as Waterfowl Habitat was acceded to on 22 November 1977 with one site listed. On 3 January 1984 four more sites

were added. There are four biosphere reserves, designated in 1976.

## ADMINISTRATION AND MANAGEMENT

The first administrative body dealing with nature conservation - the Temporary State Commission for Nature Protection - was created in Krakow in 1919 by Order of the Minister of Religious Persuasions and Public Enlightenment and was transformed in 1925 into the State Commission for Nature Protection. The Decrees of 1936 (Dz.U.R.P. nr. 94, poz. 660) and 1937 (Dz.U.R.P. nr. 27, poz. 195) created a Permanent Department within PROP and five regional Nature Protection Committees. The major activity prior to 1945 was the establishment of national parks and nature reserves. The Law on Nature Conservation of 1949 was followed by a Council of Ministers' Order of 1950 (Dz.U. nr. 13, poz. 127) creating the State Council for Nature Conservation (PROP) and in 1969 (Dz.U. nr.12, poz. 88) by the formation of Conservators of Nature offices in each of the 17 administrative regions (voivodships) of the country. Under Article 9 of the 1949 Law nature conservation became the responsibility of a Chief Conservator of Nature within the Ministry of Forestry and Timber Industry, but in the 1970s a separate Ministry, the Ministry of Administration, Regional Economy and Environmental Protection (*Ministerstwo Administracji, Gospodarki Terenowej i Ochrony Srodowiska*) took over the overall control of environmental protection and spatial planning functions. On 12 November 1985 a new law (Dz.U. nr. 50, poz. 262) created the Ministry for Conservation of the Environment and Natural Resources (*Ministerstwo Ochrony Srodowiska i Zasobow Naturalnych*) which deals with all aspects of environmental protection (air, water, solid wastes, soils, water management, geology and nature conservation) and all matters governed by the Law on Nature Conservation of 7 April 1949, except the administration of national parks. The Chief Conservator for Nature was also a Vice-Minister whilst there was a separate Director in charge of the Ministry's Department of Nature Conservation and Soil Management (*Departament Ochrony Przyrody i Powierzchni Ziemi*). However, only the Ministry for Conservation of the Environment had executive control over national parks deciding overall principles of protection and management.

Administratively, the complete national park system was managed by the Ministry of Agriculture, Forestry and Food Economy (*Ministerstwo Rolnictwa, Lesnictwa i Gospodarki Żywnosciowej*) and specifically by its Department of Forestry and National Parks (*Departament Lesnictwa i Parkow Narodowych*). This section employed specialists in nature conservation and maintained the central register for national parks, nature reserves and landscape parks. However, spatial planning was within the responsibility of the Ministry of Construction and Municipal Economy (*Ministerstwo Budownictwa i Gospodarki Komunalnej*).

In 1990 overall responsibility was taken over by the newly created Ministry of Environmental Protection, Natural Resources and Forestry (*Ministerstwo Ochrony Srodowiska,*

*Zasobow Naturalnych i Lesnictwa*). This ministry is undergoing internal reorganisation and precise responsibilities are yet to be fixed.

According to the Law of 23 October 1987, the State Council for Nature Conservation and the State Council for Environmental Conservation are the official advisory bodies, the former on nature conservation matters, and the latter on environmental conservation aspects. The Minister for the Environment appoints members of both bodies and is their Chairman. The State Council for Nature Conservation gives advice and expert opinions on all projects concerning the creation of national parks, landscape parks and nature reserves and also presents its own initiatives. The State Council consists of a Secretariat and seven Permanent Commissions, including the Commission on National Parks and Nature Reserves, the Commission on the Protection of Inanimate Nature and the Commission on the Protection and Management of the Landscape. The Commission on National Parks and Nature Reserves cooperates closely with the councils of specific national parks, with the Voivodship Conservators of Nature and with the Academy of Science's Nature Protection Research Centre (*Zaklad Ochrony Przyrody i Zasobow Naturalnych, PAN*), with the Nature Conservation Research Centre of the Polish Academy of Sciences (*Zaklad Ochrony Przyrody i Zasobow Naturalnych PAN*) and with the Forestry Research Institute (*Instytut Badawczy Lesnictwa - Zaklad Ochrony Przyrody*). The Commission is responsible for the preparation of documentation (or its review) prior to the creation of new national parks and nature reserves and for programmes of protected areas systems as well as research and management.

The 1949 Law envisaged wide social and community involvement in nature protection and resulted in the creation of the voluntary Citizen Nature Conservation Guards (*Straz Ochrony Przyrody*), which is composed of the Nature Conservation League (*Liga Ochrony Przyrody*) (founded in 1928 and now with 1,600,000 members), the Polish Tourist Society, the Polish Hunters Society, the Polish Anglers Society and the Alpine Club. Among the hundreds of emerging non-governmental organisations the Polish Ecological Club (*Polski Klub Ekologiczny*) was created in 1981 and with its regional sections provides independent advice on protected areas' creation and management.

## SYSTEMS REVIEWS

The landscape is dominated by the northern European plain which takes up the majority of the country (with only 9% of the land over 300m) bordered to the north by the Baltic Sea and to the south by the Carpathian Mountains. There are lake districts in the north west and the north east (over 1,000 lakes covering 2% of the country) with some of Europe's most extensive lowland peatbogs (1.5 million ha) present in the east of the country.

The landscape is principally agricultural, with 30% forest cover. Natural elements of this

forest contain *Quercus* spp., *Tilia* spp. and *Carpinus betulus*; *Picea* and *Pinus* occur in the mountains. There is about 25% natural and semi-natural vegetation cover.

Legal conservation of nature and landscape in Poland has a long tradition. Specific nature protection and hunting legislation dates back to the reign of the Piast and Jagiellon dynasties (14th centuries). The so-called "Wislice State", edited by King Kazimierz the Great in 1347, defined prohibitions of destructive activity in woodlands, such as pasturing of domestic animals in forests, cutting trees harbouring bees and making fire. The major document dealing with forest nature protection was the Warecki Statue (1420-1423), in which King Wladyslaw Jagiello forbade the felling of yews, prohibited making fire in forests and poaching large animals.

The first programme for the creation of a network of reserves was elaborated at the beginning of the 20th century and by 1918 there were 39 small nature reserves totalling 1,469ha. This number increased to 180 covering 28,478ha by 1937. Simultaneously with the creation of nature reserves, proposals were made to establish national parks. The main attention was paid to the mountain regions such as Tatras, Pieniny, Babia Gora, Gory Swietokrzyskie and to Bialowieza Primeval Forest in the lowlands. The first proposal to create Tatra National Park was submitted in 1885, only 13 years after Yellowstone, but complicated property structure there meant that the first Polish national park was created not in Tatras but in Bialowieza Forest. At first it was a large reserve created in 1921 and transformed into Bialowieza National Park 11 years later (1932) on the 50th anniversary of Yellowstone. By 1936 five national parks had been created in Poland, Bialowieza, Pieniny, Babia Gora, Wielkopolski and Czarnohora (now in the USSR), totalling over 10,000ha, but none was given legal recognition.

In 1988 the total area protected in national parks and nature reserves amounted to 252,791ha, or 0.8% of the surface area of the country, while the joint area of all types of protected territory, including areas of protected landscape, reached the total of about 5,724,694ha, or 18.3% of the country. According to the development plan for nature conservation, the total area of national parks will amount to 230,000ha by 1990 (141,414ha in 1989) by the addition of five new parks and the extension of a few existing parks, while nature reserves should increase by c. 600 sites, giving a total area of 180,000ha (111,377ha in 1989). The total protected area is projected as being 8,734,500ha or 28% of the surface area of the country. In the 1980s only two national parks were created (Gorce and Wigry), while one park was extended by the addition of a buffer zone. Only four had legally satisfied their spatial management plans, three parks were awaiting extension and six others were in the process of ratification. As of January 1989 there were 15 national parks (141,414ha), 970 nature reserves (111,377ha), 54 landscape parks (1,992,753ha) and 159 protected landscape areas (3,479,150ha).

The major threats to national parks are a combination of uncontrolled tourism, aerial

pollution, water pollution and unsuitable forms of economic development. A survey in 1983 suggested that two-thirds of the surface area of Poland's forests is in a state of disaster and industrial pollution has directly damaged 654,000ha of woodland. The National Spatial Management Plan until the year 1996 identified 27 regions (11% of the surface area of the country) as ecologically damaged, nine national parks and six landscape parks as severely threatened and 23 health resort areas as threatened. In 1982 the Academy of Sciences published a 'State of the Environment' report (nine volumes), and in 1985 four areas were declared 'ecological disaster' areas and 23 as of 'high ecological risk'. Also in 1982, the Polish Forest Society elaborated a report on the 'State of forests and their management in Poland'. This document discloses that in the post-war period (1954-1980) more than 610 million m<sup>3</sup> of wood, about 115 million over the projected limit, were cut down. Each year's wood production averaged 123%. A significant share in this production came from national parks and reserves. The number of tourists have reached an annual total of 9 million. There are proposals for national parks to be zoned to provide areas for recreation, communications and other uses.

#### ADDRESSES

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Panstwowa Rada Ochrony Przyrody, Wawelska 52/54, 00-922 Warsaw.

Zaklad Ochrony Przyrody i Zasobow Naturalnych Ul Lubicz 46, 31-512 Krakow. Tel: 21-51-44. Tlx:322414 PAN PL.

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**DATE** September 1987, reviewed January 1989, updated May 1989, reviewed Oct 1990

## COUNTRY: Romania

AREA 237,500km<sup>2</sup>

POPULATION 23,077,000 (UN 1985) Natural Increase 0.5% per annum  
23,200,000 (1989 estimate)

GNP US\$ 6,453 per capita (Anon 1990)

### POLICY AND LEGISLATION

The first Nature Protection Act came into force on 7 July 1930. A new act passed in October 1950 (Act No. 237) on the Protection of Natural Monuments was complemented by Order of Council No. 518 of 1954. In the same year an Environment Protection Law was introduced, to be replaced by the Environmental Law passed in 1973 (No. 9/1973). Section VI, Article 29 of this law specifies the official concept governing a national park, the legislative framework and the procedure for creating such protected areas (Oarcea, 1984).

Forests are protected by the 1954 Forest Code and the subsequent 1962 Forest Code. In 1976, a national programme to protect and develop forest resources was initiated. Full protection is afforded to about 14% of forest cover (Pop *et al.*, 1965) with a further 36% of forests classified as 'protective forest' where restrictions on forest operations, in some cases, results in complete protection. Five categories are defined: soil conservation and the reduction of avalanches, the protection of water supplies, the use of forests for recreation, for landscape protection specifically surrounding urban, industrial, tourist and health zones and as scientific research areas protecting rare fauna, geological and speleological formations (Kirby and Heap 1984). The scientific research category was one established (until 1990) by either the Commission for the Protection of Natural Monuments of the Academy of Sciences or by the Ministry of Forest Economy, whilst areas under the soil conservation category (on slopes over 35°) were subject to total protection, operated jointly by the Commission and the Ministry.

Protected areas are classified into national park, nature park and nature reserve categories:

*Rezervatii naturale* (nature reserves) are divided into seven categories classified as mixed forest, botanical, zoological, geological, morphological, palaeontological and spele-

ological (Alexandrowicz, 1982). Ecosystems within nature reserves are under complete protection, and access is subject to special authorisation with tourists allowed to enter by special permit only (IUCN, 1971). Several have strictly defined protected areas or scientific research zones where house construction and quarrying is not allowed without authorisation (IUCN, 1971; Cerovsky, 1988).

*Parcul naturala* (nature parks) would protect large areas of the landscape. These are still at a planning stage and lacking legal guidelines.

*Parcul national* (national park) category has three basic functions: scientific, socio-educational and economic (Oarcea, 1984) and is divided into two sectors: a strictly protected zone and a protected zone. The strictly protected zone has complete protection with no permanent residence allowed, no pasturing but some biological control of insect pests is permitted. In the protected zone hunting is forbidden but fishing is allowed in some lakes, subject to fish stocks. Grazing of domestic stock is also permitted in July and August, and tourism is encouraged (Retezat national park).

## INTERNATIONAL ACTIVITIES

Romania has been involved in Unesco's MAB programme (three areas were declared as a biosphere reserves in 1979, with a fourth site (Danube Delta) added in 1990), and was accepted to the World Heritage Convention on 16 May 1990 (no natural sites as yet listed).

## ADMINISTRATION AND MANAGEMENT

In 1930, as a consequence of the Nature Protection Act, a Commission for Natural Monuments was established within the Ministry of Agriculture and Landed Estates. In 1950, a new Commission, *Comisia pentru Ocrotirea Monumentelor Naturii Academii Republicii Socialiste Romania* (Commission for Natural Monuments of the Romanian Academy of Sciences) was created, consisting of a Chairman and eight members. The Commission acted as the main coordinator of research and nature conservation activities, with field projects and monitoring carried out by university biology and geography departments and by other academic institutes. A Scientific Research Base was established at Timisoara.

The supreme authority for environmental matters was the *Consiliul National pentru Conservarea Mediului* (National Council for Environment Protection) at the Council of Ministers (Cerovsky, 1986) which came under the *Consiliul National pentru Stiinta si Tehnologie* (National Council for Science and Technology). Another influential body was the *Academia de Stiinte Agricole si Silvice* (Academy of Agricultural and Forestry Sciences).

The nature conservation administration was organised on a regional basis with the three

constituent territories of Transylvania, Moldavia and Walachia divided into 40 regions, Bucharest making 41. The Commission parallels this structure with sub-commissions for the Protection of Natural Monuments in Cluj-Napoca (set up in 1933), in Craiova (set up in 1936) and in Iasi (set up in 1938). At the lower administrative level each region had a local committee (responsible to the People's Council), in charge of wildlife conservation with representatives from forestry, hunting, fishing, agriculture and education (Cerovsky, 1986; Kirby and Heap, 1984).

The Commission had a staff of specialists (biologists, forest engineers) and administrative personnel. Its main responsibility is to designate new nature reserves (for which proposals are prepared) and to administer reserve areas (including national parks) although it carries out only limited management work. It has the right to intervene in all questions concerning road construction, siting of industrial developments, tourist camps and any activity which is liable to deteriorate the reserves or degrade the landscape. The regional offices have staffs of approximately 200.

Each nature reserve has at least one warden, called a guardian, who regulates access and controls grazing rights as well as preventing illegal entry, fishing and hunting. The reserve guardian may be an employee of the national forest service and as such is often responsible for economic forest land in addition to his duties on the reserve (Kirby and Heap, 1984).

Since the summer of 1990, a new Ministry of Water Management, Forests and the Environment has been set up which operates through the existing 41 regional offices. National parks come under the administration of the Commission, a function soon to be given to the Ministry's Department of the Environment (A. Vadineau, pers comm. 1990).

The Society for Tourism and Nature Protection was created in 1920 followed in 1922 by another voluntary body, the Mountain Brotherhood (Cerovsky, 1988). More recently formed groups include the Ecological Movement of Romania (MER - Miscarea Ecologista Din Romana), the Romanian Ecological Society (Societatea Ornithologica Romana) and the Ecological-Cultural Party. Each have a general interest in protected areas (Fisher 1990).

## SYSTEMS REVIEWS

The country is divisible into lowlands less than 200m (33%), hills and highlands between 200m and 300m (36%) and mountains averaging at 800m (31%). Forests cover between 20% and 27% (Kirby and Heap, 1984; Cerovsky, 1986). There are three main vegetation zones present: steppe in the south-east (largely under agriculture), forest-steppe in the centre of the country and montane forests in the Carpathians (Davis *et al.* 1986).

Proposals for the protection of the landscape and natural monuments date back to 1907.

In the 1980's the Commission for Protection of Natural Monuments, in collaboration with the General State Forest Management Inspectorate, constructed a concept for the elaboration of a national park system consisting of at least 12 parks. The study dealt with establishment criteria, organisation and management and preparatory studies covering four new national parks.

In the early 1980's there were between 300 and 310 nature reserves covering 0.5% of the country (Alexandrowicz, 1982, Ionescu *et al.* 1985). By 1986 this had risen to 420 nature reserves and one national park (Cerovsky, 1986) covering 222,545ha (Boscaiu, 1985).

Up to the end of 1989, there was only one designated *national park* (parcul national) with a further 11 in preparation (Cerovsky, 1988). In 1990, these 11 national parks were created and one further national park, Dracea, has been proposed. Together those areas cover 664,057ha (2.79% of the country), which includes buffer and pre-park zones and also the proposed extensions to Retezat National Park.

The natural environment is presently threatened by a combination of factors such as industrial pollution, intensification of agriculture and tourism. For example, the Rosca-Letea Biosphere Reserve has until recently been threatened by agricultural development plans. These have now been stopped but the affects from upstream pollution sources are still a threat.

## ADDRESSES

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DATE December 1986; reviewed January 1989, reviewed October 1990.

**COUNTRY: Union of Soviet Socialist Republics****AREA** 22,272,000km<sup>2</sup>**POPULATION** 286,717,000 (1989 estimate) Natural Increase 1.0% per annum**GNP** US\$ 8,865 per capita (Anon, 1990)**POLICY AND LEGISLATION**

Several articles in the 1977 Constitution of the USSR reflect the growing prominence given to environmental protection. Article 18 makes it a primary duty of the State to protect and make scientific use of natural resources and to ensure air and water quality, whilst Article 67 obliges all Soviet citizens to protect nature and conserve its riches. It is augmented by the 1985 decree on the enforcement of nature conservation laws and the rational use of natural resources. A draft law to update and encompass all forms of environmental protection was prepared and submitted to the Council of Ministers in 1989 (Anon., 1988).

A long-term programme for environmental protection and rational use of natural resources of the USSR in 1991-1995 and until 2005 has been drafted. The programme is: to provide conditions beneficial for health, to preserve the biosphere (of relevance to protected areas), to utilise natural resources on a sustainable basis, to induce perestroika into ecological thinking and develop ecological awareness. According to preliminary calculations, its implementation will cost from 139 to 153 billion roubles in capital investments (Anon, 1989).

Relevant area protection laws appeared in Imperial Russia during the 1880s in the form of hunting, land use and forestry regulations (Karpowicz, 1988), followed by the first conservation measures in 1909. Protected areas legislation appeared in 1921, in the form of a decree by the Council of People's Commissioners entitled 'Protection of Natural Monuments, Gardens and Parks' and signed by V.I. Lenin. In 1957 a series of acts addressing conservation were passed in the wake of the Conservation of Nature Act in Estonia. This was followed in 1968 by the Land Legislation laws of the USSR and union republics. In 1972 a decree was passed by the Central Committee of the Communist Party of the Soviet Union and the USSR Council of Ministers to strengthen nature conservation and improve the use of natural resources. This led to the current legislation which is based on the State regulations of 25 June 1980 (coming into force on 1 January 1981) and entitled The Law on

Wildlife Protection and Use and The Law on Air Protection. These USSR and Soviet Republics acts on conservation and utilisation of fauna and on air conservation include regulations on protected natural areas and measures to ensure wildlife protection (Articles 21-26) approved by the State Planning Committee and the State Science and Technological Committee of the USSR Council of Ministers (Kolbasov, 1981; Karpowicz, 1988). In 1985 the decree of the USSR Supreme Soviet covered conservation of nature law and rational use of natural resources.

The legislative status of State nature reserves is based on Article 21 (Section 6 - "creating preserves and reserves") and Article 25 ("protection of animals in preserves, reserves and other protected areas") of the 1981 Law on Wildlife Protection and Use, following the former two acts of the Supreme Soviet, Principles of Land Legislation of the USSR and Union Republics (adopted on 13 December 1968) and Principles of Water Legislation of the USSR and Union Republics (adopted on 10 December 1970). In accordance with the Principles of Land Legislation, any activity disturbing natural ecosystems within reserves, or threatening the conservation of natural objects of special scientific or cultural value, is prohibited both in the territory of reserves and surrounding protected zones. The State regulations entitled The Status of State *Zapovedniki* enacted by the Council of Ministers of the USSR on 27 November 1951, together with the relevant regulations of the Republics, have been revised in the 1981 Act.

There are approximately 60 different categories of protected land which provide for nature conservation to varying extents. There are six main categories of nature conservation areas, represented both on the national and republic level. The principal category, and the most rigorously protected, is the state nature reserve or nature preserve, of which there are approximately 165, covering 17.5 million ha in the 15 Soviet republics (less than 1% of the USSR).

*Zapovedniks* (State Nature Reserves) defined as typical or unique plots of natural land used by "scientific institutions...and studied for its natural complexes and established on land excluded from economic utilisation". Forbidden activities include building construction, any "economic activities", such as agriculture or industry and "unrestricted entry". As far as possible they are maintained in their natural condition unchanged by man. They exist both to protect threatened flora and fauna, and to serve as an outdoor laboratory for field study.

Most *zapovedniki* have a permanent scientific staff. Main management objectives include: (1) protection of wildlife and its habitats, including maintenance of entire ecosystems; (2) scientific research; and (3) strictly limited recreational activities, and, in some cases, controlled tourism. Surrounding each state nature reserve is an area of semi-protected land which provides a buffer to the surrounding countryside. Existing economic activities are allowed to continue, providing they are not harmful (Knystautas, 1987).

*Natsional'nyi park* (National parks) protected natural areas established in natural wilderness and altered landscapes (including arable land), although mainly on state forest property (Cerovsky, 1988). They are designated for recreation as well as nature protection and, as in the case of a protected lakeshore, differ from state nature reserves in that tourism is allowed (Braden, 1986). The legislation for national parks is complex. Sites are zoned into: areas in which economic activities are controlled; nature reserves containing the finest examples of original natural habitat, where economic activities and public entry is forbidden; nature sanctuaries (*zakazniki*) where tourists are allowed but economic activities are strictly prohibited; and peripheral buffer areas of economic activity, where habitation and sustainable levels of exploitation of natural resources (including fishing) are permitted (Knystautas, 1987).

*Zakaznik* (Nature sanctuaries or partial reserves) are natural areas partly withdrawn from economic utilisation because they contain outstanding landscapes, rare plants or breeding colonies of threatened species. Controlled hunting is sometimes allowed. Many *zakazniki* are only fully protected in certain seasons when all economic activities and entry is banned. Their status and administration varies in the different republics of the USSR. They are established to enable certain floral and faunal populations to recover within a specified time period. Exploitation is prohibited during this period, unless it does not interfere with management objectives (Braden, 1986; Knystautas, 1987).

*Zapovedno-okhotnich'ye khozyastvo* (National hunting reserve) are highly protected and provide vital refuges for wildlife.

*Natsional'nyi pamyatnik* (Nature monuments or national monuments) consist of limited areas surrounding isolated natural features such as geological sites or exceptionally old trees. Approximately 40% of these sites are of botanical interest (Braden, 1986).

Protected seashore areas, sea islands and sea shelves are established to protect the environment, conserve gene pools and provide for the restoration of resources, recreation and education (Borodin *et al.*, 1984).

In addition, there are state forests and forest reserves established to protect watersheds, to provide windbelts and control erosion. Green zones and forest parks are usually protected green belts around cities and health resorts. They have limited nature conservation value and are usually managed cultural landscapes with a high recreation priority (Borodin *et al.*, 1984).

## INTERNATIONAL ACTIVITY

In a *Pravda* article entitled "The Reality and Guarantee of a Safe World", Mikhail Gorbachov identified the need to develop a global strategy for environmental protection

and rational use of natural resource activities. This official view supports the Soviet Union's international conservation cooperation (Anon, 1989).

In 1988 the USSR participated in 55 international conventions and agreements in the field of environmental protection. Amongst them several concern protected areas (Anon 1989). A network of wetlands of international importance has been established under the Ramsar Convention, which was ratified by the USSR on 11 October 1976. In 1990 there were 12 sites. A further 16 are proposed adding 8,000,000ha to the network. The USSR is also actively involved in developing a network of biosphere reserves under the Unesco MAB programme (in 1990 there were 19 sites). The USSR signed the World Heritage Convention on 12 October 1990 but no natural sites are as yet listed although Lake Baikal and Kronotskiy zapovednik on Kamchatka are provisionally under discussion. International cooperation between the USSR and the USA has extended to the twinning of reserves for comparative research and management purposes. An international peace park may be sited on the shores of the Bering Strait.

Multilateral cooperation between the members of the Warsaw Pact is implemented within the framework of the Permanent Commission of the Warsaw Pact on Cooperation in Environmental Protection, founded by a resolution of the Warsaw Pact session held in 1988. This commission reviews the most important conservation problems of the member nations (Anon, 1989). A transboundary park has been established with Finland, and others are proposed with Poland, Czechoslovakia, Romania, Mongolia and China.

Cooperation with Sweden has been implemented within the framework for a Joint Working Group on Environmental Protection under the Soviet-Swedish Intergovernmental Commission on Economic and Scientific and Technical Cooperation. Among the primary areas of cooperation is the conservation of ecological systems and individual flora and fauna species (Anon, 1989).

## **ADMINISTRATION AND MANAGEMENT**

Until 1988 the supreme authority for broad and comprehensive environmental issues (executive and management roles in nature conservation) was the central government's Council of Ministers and its representatives within each republic. Administration was handled by national bodies such as the State Committee for Hydrometeorology and Natural Environmental Control (concerned with nature conservation, forestry and game management) and the USSR Agro-Industrial Trust (formerly USSR Ministry of Agriculture), with committees at republic level.

In January 1988 the administrative bureaucracy became streamlined and simplified by the creation of the USSR State Committee for Nature Conservation (*Goskompriroda*),

which is now responsible for co-ordinating conservation activities throughout the whole of the USSR. *Goskompriroda* has offices at the Republic level, further divided into 200 oblast (district) level offices each with an average of 200 staff. Its main tasks include monitoring the use and conservation of natural resources, management of nature reserves, monitoring of hunting activities, registration of threatened fauna, production of the USSR red book and dissemination of information about the environment.

In 1985 4.4 million roubles were spent on national parks and 27.8 million roubles on the state nature reserve system by 28 different administrative bodies, employing over 1,000 specialists. In 1988 a budget of 10,000 million roubles was earmarked for use by the State for environmental protection, as compared with a total of 60,000 million roubles spent during the previous decade (Karpowicz, 1988).

On 1 January 1975 the then 106 state nature reserves (*zapovedniki*) were under the direct or indirect supervision of the Department of Nature Conservation and Game Management of the USSR Ministry of Agriculture. The majority of *zapovedniki* are managed by the departments or committees of nature conservation in the republics but some fall under the supervision of the USSR Academy of Sciences. By 1988 most *zapovedniki* had come under the administration of the Chief Administration for Nature Conservation, Nature Reserves, Forestry and Game Management (*Glavpriroda*). Final approval for the establishment of reserves was given by *Gosplan*, the State Planning Committee (Braden, 1986). Most *zapovedniki* have 5 to 20 scientific staff, additional research being undertaken by the Academy of Sciences, universities and other institutions (Braden, 1986). In the RSFSR, national hunting reserves are administered by *Glavokhota*, the Chief Administration for Hunting and Nature Reserves. Rangers are responsible for controlling poaching and hunting is limited to sustainable levels.

The oldest and the largest organisation for nature conservation in the USSR is the All Russian Society for Nature Conservation. Founded in 1924, it is reputed to be the largest in the world, with 38 million members active in local groups, collectives and state farms, factories, offices and schools. In all Soviet republics there are national nature conservation societies which work within the framework of the peace council of the USSR. Other societies include the USSR Geographical Society, USSR Theriological Society and the USSR Ornithological Society. The basis of nature conservation is taught both in schools and in universities and other institutions of higher education (Kaystautas, 1987). A union of environmental protection societies was set up in early 1989.

In the past even designated protected areas were not completely secure from short-term economic gain, and during the Stalinist era the reserve status of 88 *zapovedniki* was removed. Encroachment on protected areas persists. Problems include oil prospecting, livestock grazing, over-fishing, uncontrolled tourism, illegal building schemes and hunting by the privileged few (Braden, 1986; Karpowicz, 1988). The Dneprovsko-Teterevskoe

Nature Hunting Reserve lies partly within zone A (total evacuation) of the Chernobyl reactor accident site.

## SYSTEMS REVIEWS

The USSR is the world's largest country covering one sixth of the globe's land surface. For the most part it is lowland, with only 5% lying above 1500m.

There are four distinct vegetation zones: tundra, forest (broadleaf woodland and coniferous taiga), steppe and desert. The deserts and semi-deserts (Central Asia) fringing the southern borders give way to steppe and temperate grasslands which are replaced by a great zone of broadleaf woodland and conifer taiga forest stretching for more than 11,250km east-west, and by treeless cold desert and tundra along the northern coasts. Forests now cover 7.47 million km<sup>2</sup> (33% of the USSR) with vast areas of forest remaining virgin in the far north, parts of Siberia and in the high mountains (Davis *et al.* 1986).

Protected territories play an important role in the conservation of rare species of mammals. They contain 39% of the amphibian mammal species, 55% of the bird species, 56% of the fish species, 68% of the reptile species and 90% of the amphibians listed in the *Red Book* of the USSR. Protected areas have been virtually the only means for the conservation of a number of species, such as Amur tiger, kulan, goral, Bukhara deer and spotted deer (Anon, 1989).

## ADDRESSES

- ° USSR Goskompriroda, Nezhdanna Street 11, Moscow K-9, 103009. Telex 411258 zerno su. Tel. 0107 095 423 0311.

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**DATE** December 1984, reviewed September 1988, reviewed October 1990

## COUNTRY: Socialist Federal Republic of Yugoslavia

AREA 255,803°

POPULATION 23,700,000 (1989)      Natural Increase 0.6% per annum

GNP US\$ 2,480 per capita (1987)

### POLICY AND LEGISLATION

Although environmental protection was written into the Federal Constitution (*Ustav Socialisticka Federativne Republike Jugoslavije*) of 21 February 1974 it was only recently incorporated into federal development policy as the 'Development policy in 1990 in the SFRY', Section 6.2. 'Environmental protection and promotion policies', Belgrade, December 15, 1989. Within the federal legislative framework, each republic and autonomous province enacts specific legislation concerning the protection of the environment and protected areas (Singleton, 1985; IUCN, 1987).

One of the earliest legal measures for nature conservation, the Hunting Act of 1893, was introduced when the country was under the control of the Austro-Hungarian Empire. Among the first laws adopted in 1945 was the law on the Protection of Cultural Heritage and Conservation of Natural Rarities.

The protected area legislation varies from one republic to another, as does the legislation covering the range of activities that can be carried out within protected areas (forestry, hunting, fishing and certain agricultural works). By 1985 there were no specific laws on the creation of marine protected areas. However, general texts on conservation allowed for the establishment of such sites (Singleton, 1985).

The most important types of protected natural areas have been classified into the following groups:

*Nacionalni park* or *narodni park* (national parks) constitute the largest natural zones of outstanding natural values. The first national parks were proclaimed in 1928 by the royal government which designated several areas in Croatia. Park management varies between republics, many sites being internationally recognised as national parks but others are essentially protected landscapes.

*Regionalni park prirode, krajinski park, regionalni park*, (regional natural parks or nature

parks) constitute large areas of specific natural value and are of importance as landscape.

*Rezervat prirode, strogi, naravni rezervat* (natural reserves or nature reserves) are small in size. They are established to protect specific natural elements or species.

*Spomenik prirode, naravni spomenik* (Natural monuments) are outstanding geological or animate features protected for their rarity or specific properties.

*Zasticeno rekreaciono podrucje* (Recreational zones) are large areas such as sea coasts, lake shores, river banks, mountain resorts or natural features which are protected specifically for recreation and sports activities.

*Ostala zasticena podrucja prirode (OZPP) or Karakteristicni pejzazi* (Sanctuaries of landscape or recreational importance) are sites established largely for recreational importance, cultural heritage and characteristic landscape values are of extensive interest to tourism.

*Memorijalni spomenik* (Memorial monuments) are small natural zones established to protect historic features such as important battlegrounds.

*Spomenik oblikovane prirode or hortikulturni spomenik* (Ornate natural monuments or horticultural gardens) are notable landscape gardens.

### *Bosnia and Herzegovina*

Natural reserve designation was enacted by a decision of the Institute for Protection of Cultural and Natural Monuments and Natural Rarities No. 683/54, strict reserves being set up by a decision of the National Institute for the Protection of Historic Monuments and Natural Beauty of 3 June 1964. Law No. 5, passed on 13 January 1972, resulted in the Executive Committee designation of Sutjeska National Park (IUCN, 1971; Baccar, 1977; Mestrovic, 1983).

### *Croatia*

Parks are designated by laws specific to each site. For instance, whilst Mljet National Park was designated under the Mljet National Park law published in 'Narodne novine' No. 49/60, 7 XII 1960, nature reserves in Croatia are declared under a decree for the Protection of Natural Rarity No. 221/48 and by proposals of the People's National Liberation Committee No. 05-5056/1 of 1961 (MAB, 1979). All activities in the nature reserves of Croatia are restricted by regional by-laws (Singleton, 1985).

### *Macedonia*

Each national park is designated under site specific laws. Only regional parks may be established by region-wide legislation.

### *Montenegro*

Protected areas are established by enactment of the conservation law of 6 August 1952. Plitvice National Park was established by the general act of 1954. Kotor World Heritage Park, an example of the legal complexities of site designation, was enacted by the decision of three organisations: the Republic Institute for Protection of Nature of the Socialist Republic of Montenegro (under general decree No. 7/1968), Republic Institute for Protection of Cultural Monuments of the S.R. Montenegro and the Town Assembly of Kotor (declaration of 14 June 1979).

### *Serbia*

This includes the incorporated provinces of *Kosovo* and *Vojvodina*. This republic follows the example of all others by designating areas under its own legislation.

### *Slovenia*

National parks are created by special decree under the National Parks Law (Uradni List No. 6 of 1959).

## **INTERNATIONAL ACTIVITIES**

The World Heritage Convention was ratified on 26 May 1975, with three natural sites inscribed by 1990 (one in 1979, one in 1980 and one in 1986). Yugoslavia became party to the Convention on Wetlands of International Importance on 28 March 1977, with two sites listed, and was one of the participating states in the Barcelona Convention (adopted in 1975). Two biosphere reserves were established between 1976 and 1977.

The network of biosphere reserves are linked in with WHO programmes in a joint effort to establish Environmental Specimen Banks (MAB, 1979).

## ADMINISTRATION AND MANAGEMENT

Environmental administration is in the form of a decentralised public authority structure in each republic (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia). The republics each have the power to set up a council for the protection of the environment which is charged with the responsibility of coordinating the activities of the various environmental agencies. The councils are federated together in the *Jugoslavenski Savez za Zastitu i Unapredivante Covekove Sredine* (SAVEZ), which advises on conservation matters (Singleton, 1985). An institute for nature protection exists in each of the six republics (IUCN, 1987). The institutes are staffed by biologists, geographers and lawyers, with a director who maybe either a civil engineer or a forester (Godiel, 1981; Singleton, 1985). By law each national park must have its own administration, professional staff and funds for effective protection (Godiel, 1981). Differences in administration and management arise between republics:

In *Bosnia and Herzegovina* the national parks have their own authorities whilst the nature reserves are administered by "Experimental Farms" belonging to the Ministry of Agricultural Economy.

In *Croatia* most of the national parks are administered by the cultural section of the Secretariat for National Education, Culture and Physical Education with each park having its own administrative committee, usually its own administrative office and a special management plan. In the case of the Lokrum and Krka reserves, the town assemblies are responsible for management under jurisdiction from the urban plan (IUCN, 1971).

In *Macedonia* the Department of Agriculture and Silviculture has overall responsibility with each park having its own governing authority (IUCN, 1971; Singleton, 1985).

In *Montenegro*, some national parks such as Biogradska Gora have a special controlling body while others, including Durmitor and Lovcen, have administrative responsibility vested in the Nature Protection Institute of the Republic or in the Republic Secretariat for Education, Culture and Science. The management is carried out by a local self-management community who elaborate the plans (Singleton, 1985). Responsibility for the management of Kotor World Heritage Site lies with the Town Assembly of Kotor, the Republic Institute for Protection of Cultural Monuments and the Republic Institute for Protection of Nature.

In *Serbia* the *Republički zavod za zastitu prirode* manages nature conservation. The two incorporated provinces of Vojvodina and Kosovo also have nature conservancy authorities.

In *Slovenia*, Triglav National Park is administered by a special commission attached to the Assembly of Radovljica Commune whilst reserves are dealt with by the Forestry Service.

Non-governmental organisations in Yugoslavia tend to be regional. Ecological parties

are being formed in some republics but these vary greatly in their influence. In Slovenia the Green Party is a major political force (Fisher, 1990).

## SYSTEMS REVIEWS

Geographically in the centre of the Balkan peninsula, Yugoslavia has a great diversity of habitats, being under the influence of Mediterranean, alpine and lowland Pannonian climates of central Europe. Deciduous oakwoods cover the karstlands of the far north and the far south between 200 and 700m. Oaks *Quercus* spp. dominate at these altitudes, but are replaced by beech *Fagus* spp. at higher altitudes. Many of these forests are ancient and relatively undisturbed. In the central mountains, coniferous forest is dominant, with riverine forests of alder *Alnus* spp., willow *Salix* spp. and ash *Fraxinus* spp. at lower levels. The higher mountain massifs are well represented by relatively undisturbed alpine communities with many endemic plants. Coastal maquis is still widespread, with some patchy forest along the Croatian coast. The northern Pannonian plain is mostly agricultural, but with some relicts of steppe flora on saline soils (Davis *et al.* 1986).

A relatively low population density has ensured the survival of a number of important ecosystems, notably forest and alpine systems. In contrast the majority of the larger wetland sites have been drained and put under cultivation or pasture since the end of World War Two. In several of the wetlands that survive, suitable habitats for breeding waterfowl are seriously degraded or polluted (Duffey, 1982; IUCN, 1987; Singleton, 1987; Institute for Nature Conservation of the SR of Serbia, 1988).

The first major inventory of protected areas (Inventory of Natural Regions and Natural Monuments), undertaken in 1976, estimated such areas to cover 2.2% of the country. This figure had risen considerably by the time a second inventory was undertaken in 1987. For example, the number of protected natural regions and monuments has increased from 1,008 in 1976 to 1,313 in 1987. Designated national parks had risen from 16 to 22 by 1987, with a total area of 524,784 ha (Institute for Nature Conservation of the SR of Serbia, 1988).

Some of the problems affecting protected areas include the conflict of interests between tourism, water and air pollution, economic development and conservation. Many of the park authorities have insufficient funds and have to rely on financial assistance from tourism, forestry, sporting and recreational activities. Sites which are near industrial complexes have also suffered from a lack of concern for environmental issues following rapid industrial expansion in the early 1950's (Duffey, 1982; Singleton, 1985; IUCN, 1987).

## ADDRESSES

### Federal

- Republički zavod za zaštitu prirode SR Srbije, (Nature Conservancy), Treći Bulevar 106, 11070 Novi Beograd, Serbia. Tel: 142-281; 142-165.

### Republic

- Zavod za zaštitu spomenika kulture prirodnih znamenitosti i rijetkosti SR Bosne i Hercegovine, (Office for the protection of cultural monument, Department of Nature Conservation), Obala 27. jula 11-a, 71000 Sarajevo, Bosnia and Herzegovina. Tel: 071/653-555
- Republički zavod za zaštitu prirode SR Hrvatske, (Nature Conservancy), Ilica br. 44, 41000 Zagreb, Croatia. Tel: 041/432-022
- Republički zavod za zaštitu na prirodne retkosti SR Makedonije, (Nature Conservancy), Rudera Boskovića bb, Karpus II, 91000 Skoplje, Macedonia. Tel: 091/251-133
- Republički zavod za zaštitu prirode SR Crne Gore, (Nature Conservancy), Trg., Nikole Kovacevića br. 7, 81000 Titograd, Montenegro. Tel: 081/22-992
- Pokrajinski zavod za zaštitu prirode SAP Vojvodine, (Nature Conservancy), Petrovaradinska tvrđava, 21000 Novi Sad/Petrovasadin tvrđava, Vojvodina, Serbia. Tel: 021/432-200
- Pokrajinski zavod zaštitu prirode SAP Kosovo, (Nature Conservancy), Lenjinova br. 18, 38000 Pristina, Kosovo, Serbia. Tel: 038/27-027; 27-026
- Zavod SR Slovenije za varstvo naravnih in kulturnih spomenikov, (Institute for the protection of monuments and the department of nature conservation), Plečnikov trg, 2, 61000 Ljubljana, Slovenia. Tel: 213-083

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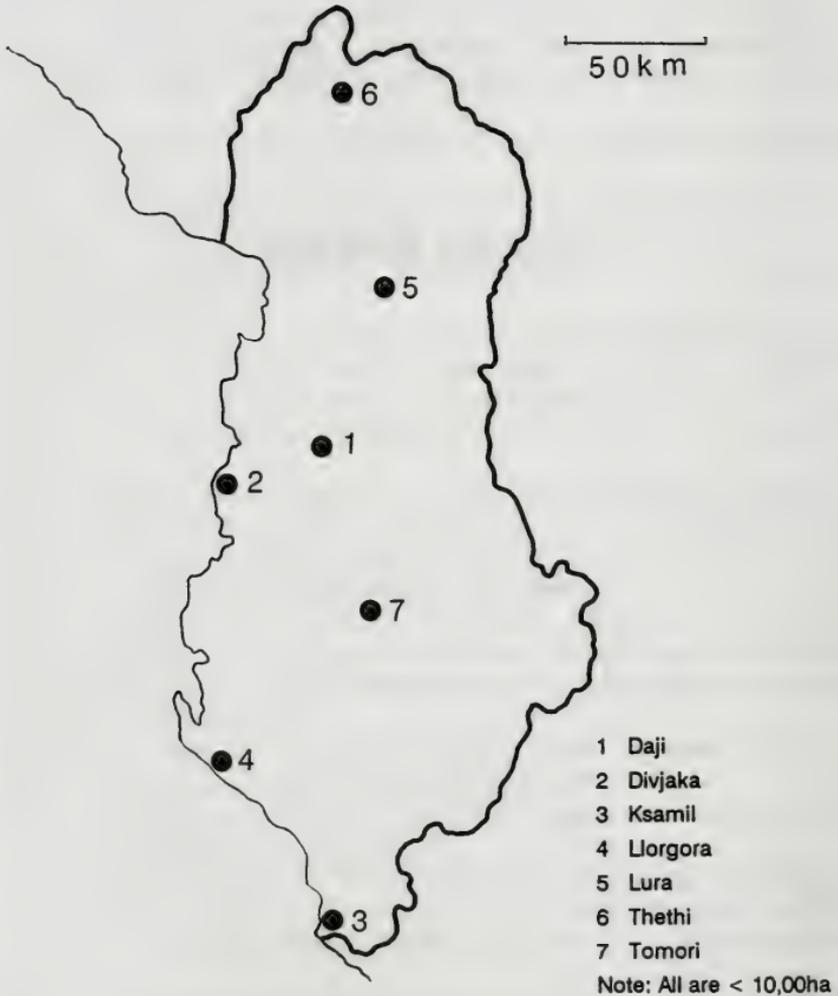
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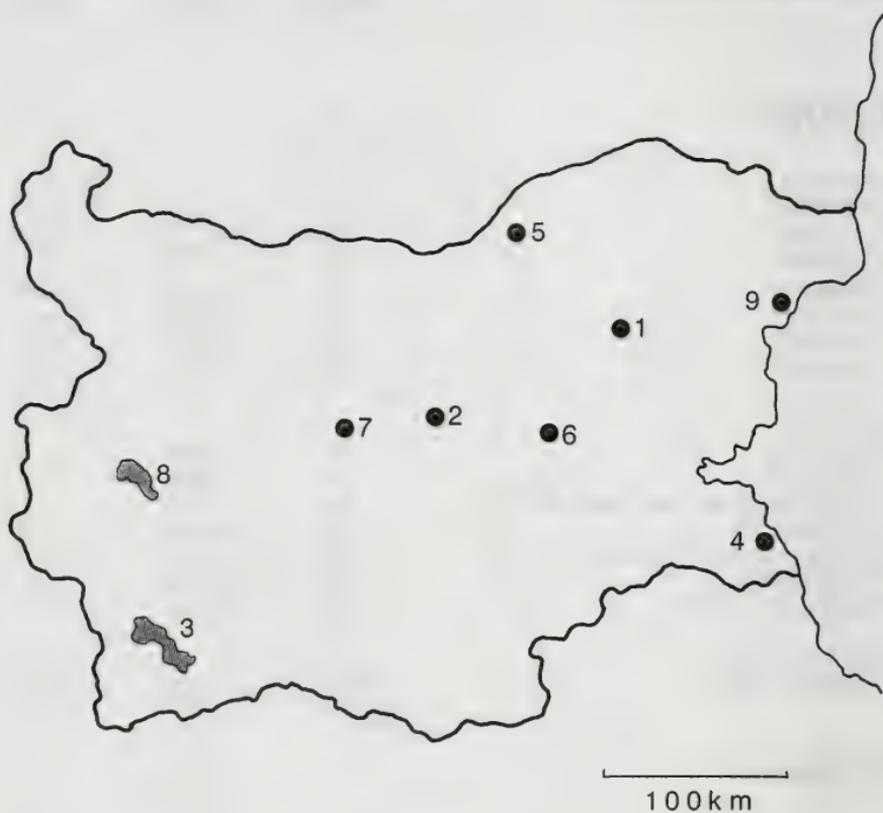
## **Protected Area List**

## National Parks of the People's Socialist Republic of Albania



Country/Site type/Name of Area	Category	Area (ha)	Year
<b>ALBANIA</b>			
<i>National Parks</i>			
Daji NP	II	4,000	1966
Divjaka NP	II	4,000	1966
Ksamil NP	II		
Llogara NP	II	3,500	1966
Lura NP	II	4,000	1966
Thethi NP	II	4,500	1966
Tomori NP	II	3,000	1956
<i>Nature Reserves</i>			
Berzan NR	IV	1,000	
Cangonj NR	IV	3,000	
Fushe-Senje (Kuçe Negel Patok) NR	IV	4,200	
Karaburum NR	IV	12,000	
Kuturman (Senisht Qerret Mirake) NR	IV	4,000	
Pishe Poro NR	IV	5,500	
Prushkull (Potull) NR	IV	1,800	
<i>Specially Protected Areas</i>			
Divjaka NP (SpPA)	SPA	1,000	1956
<b>BULGARIA</b>			
<i>National Parks</i>			
Chumensko plato NP	IV	3,930	1980
Etura NP	II	434	1967
Melnishki pyramidi NP	III	1,165	1960
Pirin NP	II	27,400	1963
Roussenski Lom NP	III	3,259	1970
Sinite kamani NP	II	6,685	1981
Steneto NP	II	5,487	1963
Vitosha NP	II	26,547	1934
Zlatni pyassatzi NP	IV	1,320	1943
<i>Botanical Reserves</i>			
Tchervenata stena BotR	IV	1,142	1962
Tissata (Tissova Bartchina) BotR	IV	1,200	1949

## National Parks of the People's Republic of Bulgaria



- 1 Chumensko plato
- 2 Etura
- 3 Pirin
- 4 Ropotamo
- 5 Roussenski Lom
- 6 Sinite kamani
- 7 Steneto
- 8 Vitosha
- 9 Zlatni pyassatzi

■ > 10,000ha  
● < 10,000ha

## Bulgaria

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Bulgaria, contd ...</b>			
<i>Reserves</i>			
Alibotouch R	I	1,628	1951
Atanassovsko ezero R	IV	2,020	1980
Baevi douпки-Djindjiritza R	I	2,873	1934
Bistrichko Branichte R	I	1,177	1935
Boatin R	I	1,281	1948
Djendema R	I	3,291	1953
Doupkata R	I	1,211	1956
Goliam Skakavetz R	I	4,180	1985
Ibar R	I	1,701	1985
Kamenchtitza R	I	1,018	1984
Kongura R	I	1,312	1988
Koupena R	I	1,086	1961
Maritchini ezera R	I	1,509	1951
Oreliar R	IV	1,050	1985
Parangalitza R	I	1,508	1933
Pechti skali R	I	1,465	1979
Severen Djendem R	I	1,610	1983
Sokolna R	I	1,250	1979
Srebarna R	IV	1,143	1988
Stara reka R	I	1,906	1981
Steneto R	I	2,636	1980
Tajansko jdrelo R	IV	1,290	1985
Tchouprene R	I	1,440	1974
Tzaritchina R	I	1,420	1949
Uzdini ezera R	IV	1,150	1985
Vratchanski karst R	I	1,409	1983
<i>Forest Reserves</i>			
Kamtchia FoR	IV	1,445	1951
Ouzounboudjak FoR	I	2,535	1956
Rila Monastery FoR	I	3,446	1986
<i>Biosphere Reserves</i>			
Parc national Steneto	IX	2,889	1977
Reserve Alibotouch	IX	1,628	1977
Reserve Bistrichko Branichte	IX	1,177	1977
Reserve Boatine	IX	1,281	1977
Reserve Djendema	IX	1,775	1977
Reserve Doupkata	IX	1,210	1977
Reserve Douпки-Djindjiritza	IX	2,873	1977
Reserve Koupena	IX	1,084	1977

## National Parks of the Czech and Slovak Federative Republic



Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Bulgaria, contd ...</b>			
Reserve Maritchini ezera	IX	1,510	1977
Reserve Ouzounboudjak	IX	2,575	1977
Reserve Parangalitza	IX	1,509	1977
Reserve Tchouprene	IX	1,440	1977
Reserve Tsaritchina	IX	1,420	1977
<i>World Heritage Sites</i>			
Pirin National Park	X	40,060	1983

## CZECHOSLOVAKIA

### *National Parks*

Krkonoše NP	V	38,500	1963
Mala Fatra NP	II	22,630	1988
Nizke Tatry NP	II	81,095	1978
Pieninsky NP	II	2,125	1967
Slovensky raj NP	II	19,763	1988
Tatransky NP	II	74,111	1948

### *National Nature Reserves*

Adrspassko Teplice skaly SPR	IV	1,772	1933
Choc SPR	IV	1,428	1982
Dropie SPR	IV	5,658	1955
Dumbier SPR	IV	2,043	1973
Janska dolina SPR	IV	1,696	1984
Javorina SPR	IV	11,589	1954
Karlstejn SPR	IV	1,547	1955
Kokorinky dul SPR	I	2,097	1953
Modravske slati SPR	I	3,615	1989
Prameny labe SPR	I	2,884	1980
Prameny upy SPR	I	4,280	1980
Salatin SPR	I	1,193	1982
Stara Reka SPR	IV	1,197	1956
Tista SPR	IV	3,066	1981
Vltavsky Luh SPR	IV	1,845	1989
Vychodokrkonoska SPR	IV	2,820	1952
Zapadokrkonoska SPR	IV	4,518	1952

### *Protected Landscape Areas*

Beskydy CHKO	V	116,000	1973
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Country/Site type/Name of Area	Category	Area (ha)	Year
<i>Czechoslovakia, contd ...</i>			
Biele Karpaty CHKO	V	43,519	1979
Bile Karpaty CHKO	V	71,500	1980
Blanik CHKO	V	4,000	1981
Blansky les CHKO	V	21,235	1989
Cerova vrchovina CHKO	V	16,280	1989
Ceske stredohori CHKO	V	107,000	1976
Cesky kras CHKO	V	13,000	1972
Cesky raj CHKO	V	12,500	1955
Horna Orava CHKO	V	70,333	1979
Jeseniky CHKO	V	75,000	1969
Jizerske hory CHKO	V	35,000	1967
Kokorinsko CHKO	V	27,000	1976
Krivoklatsko CHKO	V	62,792	1978
Kysuce CHKO	V	65,462	1984
Labske Piskovce CHKO	V	30,000	1972
Luzicke Hory CHKO	V	35,000	1976
Male Karpaty CHKO	V	65,504	1976
Moravsky kras CHKO	V	12,000	1956
Muranska planina CHKO	V	21,930	1976
Orlicke hory CHKO	V	20,000	1969
Palava CHKO	V	7,000	1976
Podyji CHKO	V	10,300	1978
Polana CHKO	V	20,079	1981
Ponitric CHKO	V	37,665	1985
Slavkovsky les CHKO	V	64,000	1974
Slovensky kras CHKO	V	36,165	1973
Stiavnicke vrchy CHKO	V	77,630	1979
Strazovske vrchy CHKO	V	30,979	1989
Sumava CHKO	V	160,000	1963
Trebonsko CHKO	V	70,000	1979
Velka Fatra CHKO	V	60,610	1973
Vihorlat CHKO	V	4,383	1973
Vychodne Karpaty CHKO	V	66,810	1977
Zahorie CHKO	V	27,522	1988
Zdarske vrchy CHKO	V	71,500	1970
<i>Natural Areas</i>			
Demanovske jaskyne CHPV	III	1,517	1972
Udoli Oslavy a Chvojnice CHPV	IV	1,002	1975
<i>Biosphere Reserves</i>			
Krivoklatsko Protected Landscape Area	IX	62,792	1977

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Czechoslovakia, contd ...</b>			
Palava Protected Landscape Area	IX	8,017	1986
Polana Biosphere Reserve	IX	20,079	1990
Slovensky Kras Protected Landscape Area	IX	36,165	1977
Sumava Biosphere Reserve	IX	167,117	1990
Trebon Basin Protected Landscape Area	IX	70,000	1977
<i>Proposed</i>			
Sumava NP	PRO	(167,117)	
Cergov CHKO	PRO	(28,000)	
Kremnicke vrchy CHKO	PRO	(28,400)	
Krupinska planina CHKO	PRO	(4,000)	
Litava CHKO	PRO	(3,400)	
Lucanska Mala Fatra CHKO	PRO	(30,000)	
Slanske vrchy CHKO	PRO	(35,600)	
Stolicke vrchy CHKO	PRO	(9,200)	
Volovske vrchy CHKO	PRO	(48,000)	

## EASTERN LÄNDER OF THE FRG

### *National Parks*

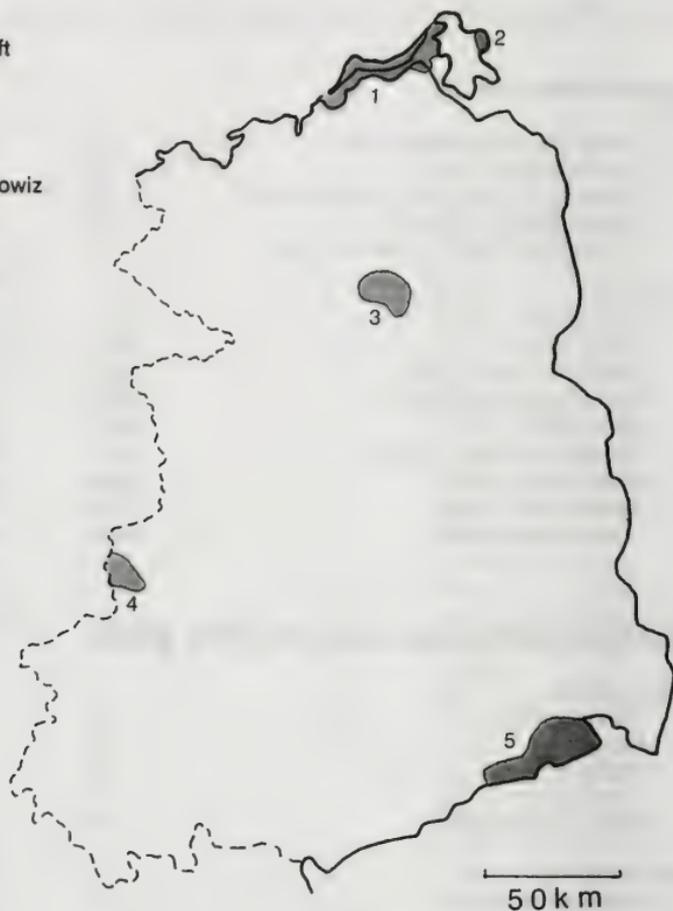
Boddenlandschaft NP	II		1990
Jasmund NP	II		1990
Muritz NP	II		1990
Oberharz NP	II		1990
Sächsische Schwoiz NP	II		1990

### *Nature Reserves*

Alter Stolberg NSG	V	4,520	1970
Anklamer Stadtbruch NSG	IV	1,200	1967
Bucher Brack - Bolsdorfer Haken NSG	IV	1,008	1978
Der Bock und Hohe Duene Pramort NSG	IV	1,832	1957
Fischteiche in der Lewitz NSG	IV	1,732	1967
Galenbecker See NSG	IV	1,015	1967
Grosser Winterberg und Zschand NSG	IV	1,069	1961
Hinrichshagen NSG	IV	1,124	1967
Insel Hiddeseck NSG	V	1,860	1955
Insel Usedom NSG	V	37,500	1966
Jasmund NSG	IV	1,500	1935
Oberharz NSG	IV	1,980	1967
Ostufer der Muritz NSG	IV	4,832	1967

## National Parks of the Eastern Länder FRG

- 1 Bottenlandschaft
- 2 Jasmund
- 3 Muritz
- 4 Oberharz
- 5 Sächsische Schowiz



Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Eastern Länder/FRG, contd ...</b>			
Peenemünder Haken, Struck und Ruden NSG	IV	1,870	1925
Peenetal-Moor NSG	IV	1,478	1981
Seegrund Ahlbeck NSG	IV	1,166	
Serrahn NSG	IV	1,708	1961
Stechlin NSG	IV	2,140	1938
Steckby-Loedderitzer Forst NSG	IV	3,550	1961
Uhlstäedter Heide NSG	IV	1,082	1981
Untere Mulde NSG	IV	1,137	1961
Vessertal NSG	IV	1,649	1939
Westdarsz und Darszer Ort mit Bernsteininsel NSG	IV	1,130	1957
<i>Landscape Protected Areas</i>			
Aga-und Elstertal LSG	V	2,796	1968
Augustusburg-Sternmühlental LSG	V	1,487	1968
Bad Freienwalde LSG	V	4,340	1965
Barlebener-Jerslebener See mit Elbniederung LSG	V	3,548	1964
Bleicheroder Berge LSG	V	4,103	1970
Blumberger Forst LSG	V	1,960	1965
Bodeniederung LSG	V	7,200	1975
Boxberg-Reichwalder Wald-und Wiesengebiet LSG	V	1,157	1968
Brandenburger Wald-und Seengebiet LSG	V	16,270	1966
Briesetal und Mühlenbecker See LSG	V	3,175	1966
Burgsteinlandschaft LSG	V	2,808	1968
Calau-Altdobern-Reddern LSG	V	4,800	1968
Choriner Endmoränenbogen LSG	V	16,500	1957
Colditzer Forest LSG	V	4,600	1963
Dahlener Heide LSG	V	16,700	1963
Dammühlenteich LSG	V	1,036	1974
Dippoldiswalder Heide und Wilisch LSG	V	2,420	1974
Dobbtiner Seen u.s.w. LSG	V	12,100	1964
Dobbin-Zieltitzer Feldmark LSG	V	2,000	1938
Dolgener und Hohensprenzer See LSG	V	1,500	1961
Dreigleichen LSG	V	1,698	1960
Dresdener Heide LSG	V	5,876	1971
Dubener Heide LSG	V	11,380	1961
Duen-Helbetal LSG	V	5,600	1963
Eisenberger Holzland LSG	V	1,828	1983
Elbaue Martinskirchen-Mühlberg LSG	V	1,490	1968
Elbhänge Dresden-Pirna und Schonfelder Hoch. LSG	V	3,540	1974
Elbtal nordlich von Meissen LSG	V	2,320	1960
Elsteraue LSG	V	10,000	1937
Elsteraue und Teichlandschaft u.s.w. LSG	V	1,860	1968

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Eastern Länder/FRG, contd ...</b>			
Elsteraue zwischen Herzberg und Ubigau LSG	V	2,160	1968
Elsterniederung u.s.w. LSG	V	19,650	1968
Endmoranenzug Brohmer u.s.w. LSG	V	5,000	1962
Fahner Hohe LSG	V	4,950	1970
Feldberger Seenlandschaft LSG	V	7,000	1962
Fischland-Darss-Zingst LSG	V	15,000	1966
Flaming LSG	V	38,670	1961
Flemsdorf LSG	V	1,720	1965
Freiberger Mulde-Zschopau LSG	V	7,000	1963
Friedewald und Moritzburger Teichgebiet LSG	V	5,565	1977
Gamengrund LSG	V	2,390	1965
Gebiet um Bad Wilsnack LSG	V	2,700	1964
Geraer Stadtwald LSG	V	1,575	1972
Gotzer Berge LSG	V	2,325	1966
Grabentour LSG	V	2,864	1968
Grosser See bei Furstenwerder LSG	V	1,200	1962
Grosser und Kleiner Gleichberg LSG	V	1,988	1939
Grosssteinberg-Ammelshain LSG	V	2,440	1963
Grunau-Grunheider Wald-und Seengebiet LSG	V	21,700	1965
Gubener Fliesstaler LSG	V	3,200	1968
Gulitzer Endmorane und Kummerower See LSG	V	9,000	1962
Haffkuste LSG	V	12,500	1962
Hainleite LSG	V	5,976	1970
Hakel LSG	V	1,425	1939
Harbke-Allertal LSG	V	22,770	1975
Harz LSG	V	154,700	1960
Havelquellseen Kratzeburg LSG	V	2,600	1962
Heiligenstadter Stadtwald LSG	V	3,025	1960
Helmestausee LSG	V	1,717	1970
Hiddensee LSG	V	1,860	1955
Hildburghauser Wald LSG	V	5,250	1978
Hohburger Berge LSG	V	2,000	1963
Hohes Holz-Saures Holz mit ostlicem Vorland LSG	V	7,240	1964
Ilmtal LSG	V	19,850	1960
Insel Usedom LSG	V	37,500	1966
Insensee und Heidberg LSG	V	1,300	1964
Jessener Berge LSG	V	1,025	1968
Kleinseenplatte Neustrelitz LSG	V	12,000	1962
Klocksiner Seenkette LSG	V	20,000	1962
Knappensee LSG	V	1,100	1968
Kohrener Land LSG	V	17,000	1959
Konigshainer Berge LSG	V	4,855	1974

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Eastern Länder/FRG, contd ...</b>			
Korbaer Teich und Lebusaer Waldgebiet LSG	V	2,258	1968
Kothener See LSG	V	1,790	1966
Krakower Seenlandschaft LSG	V	2,350	1955
Kuhberg-Steinicht LSG	V	1,377	1968
Kuhlung LSG	V	14,000	1966
Kyffhauser LSG	V	7,722	1941
Kyritzer Seenkette LSG	V	1,600	1958
Lausitzer Grenzwall zwischen u.s.w. LSG	V	14,235	1968
Lauta-Hoyerswerda-Wittichenau LSG	V	2,920	1968
Lehliner Wald- und Seengebiet LSG	V	2,525	1966
Leipziger Auewald LSG	V	5,700	1959
Lewitz LSG	V	12,000	1959
Lindenthaler Forst LSG	V	4,070	1975
Lindhorst-Ramstedter Forst LSG	V	5,996	1964
Linkselbische Taler zwischen u.s.w. LSG	V	2,355	1974
Ludwigsluster Schlosspark u.s.w. LSG	V	1,500	1955
Lychen-Boitzenburg LSG	V	7,500	1962
Madlitz-Falenhagener Seengebiet LSG	V	1,030	1965
Malchiner Becken LSG	V	6,000	1962
Markische Schweiz LSG	V	3,800	1957
Merzdorf-Hirschfelder Waldhohen LSG	V	2,060	1968
Mittelelbe LSG	V	48,200	1957
Mittelheide LSG	V	2,500	1969
Mittlere Mulde LSG	V	9,700	1963
Mittlerer Strelasund LSG	V	2,300	1966
Mittleres Saaletal LSG	V	19,150	1972
Mittleres Warnowtal LSG	V	8,500	1964
Mittleres Zschopautal LSG	V	1,487	1968
Mockern-Magdeburgerforth LSG	V	29,140	1975
Muhlhauser Stadtwald LSG	V	3,496	1970
Muldental-Chemnitzal LSG	V	11,471	1968
Muritz-Seen-Park LSG	V	30,000	1962
Nauen-Brieselang LSG	V	3,225	1966
Naunhof-Brandiser Forst LSG	V	2,750	1963
Neisseaue im Kreis Forst LSG	V	1,330	1968
Neuendorfer See LSG	V	1,600	1968
Neuruppin-Rheinsberg u.s.w. LSG	V	80,200	1966
Noitzscher-und Prellheide LSG	V	1,500	1963
Nordliches Harzvorland LSG	V	13,506	1961
Ober-Uecker-See LSG	V	5,400	1962
Obere Saale LSG	V	21,240	1965
Oberes Vogtland LSG	V	17,100	1968

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Eastern Länder/FRG, contd ...</b>			
Oberes Westerzgebirge LSG	V	17,015	1981
Oberes Zschopautal LSG	V	8,207	1968
Oberlausitzer Bergland LSG	V	30,730	1963
Osterzgebirge LSG	V	55,025	1968
Ostrand der Arendseer Hochflache LSG	V	7,210	1964
Ostrugen LSG	V	47,500	1966
Parthenau-Machern LSG	V	1,300	1963
Peitzer Teichlandschaft mit Hammergraben LSG	V	2,040	1968
Petersberg LSG	V	1,730	1961
Plauer See LSG	V	3,500	1957
Plothener Teichgebiet LSG	V	1,896	1961
Potsdamer Havelseengebiet LSG	V	16,250	1966
Pressnitztal LSG	V	2,300	1984
Rabensteiner Wald-Pfaffenberg LSG	V	1,280	1962
Rambower und Rudower See LSG	V	1,500	1960
Rathenower Wald-und Seengebiet LSG	V	17,325	1966
Rennsteigstreifen LSG	V	3,900	1940
Rinne-Rotenbachtal LSG	V	6,976	1970
Rippachtal LSG	V	2,880	1968
Rodderau LSG	V	1,720	1960
Rotehofbachtal LSG	V	2,444	1964
Saale LSG	V	28,550	1961
Sachsische Schweiz LSG	V	36,810	1956
Saidenbachtalsperre LSG	V	4,490	1962
Salzwedel-Diesdorf LSG	V	13,310	1975
Schaalsee und Heckenlandschaft Techin LSG	V	2,500	1958
Scharmützelsee-Storkower u.s.w. LSG	V	10,600	1965
Schlaubetal LSG	V	6,490	1965
Schweriner Seenlandschaft LSG	V	4,300	1938
Schwielochsee LSG	V	4,440	1965
Seendreieck bei Furstensee LSG	V	3,200	1962
Seengebiet Warin-Neukloster LSG	V	7,500	1938
Seenkette bei Comthurey LSG	V	1,200	1962
Sewekow LSG	V	2,850	1966
Spree-und Teichgebiet sudlich Uhyst LSG	V	1,210	1968
Spreniederung LSG	V	1,850	1974
Spreewald LSG	V	28,700	1968
Sprottetal LSG	V	1,100	1984
Stadtwald Berlin LSG	V	7,548	1972
Staubeckenlandschaft Brasinchen-Spremberg LSG	V	2,925	1968
Steigerwald LSG	V	1,188	1970
Stepenitztal LSG	V	1,600	1958

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Eastern Länder/FRG, contd ...</b>			
Strausberger und Blumenthaler LSG	V	6,120	1965
Striegistaler LSG	V	4,233	1968
Sudlich von Zwickau LSG	V	6,200	1968
Sudlicher Dromling LSG	V	2,556	1967
Susser See LSG	V	3,820	1954
Tal der Wilden Weisseritz LSG	V	1,415	1960
Talsperre Kriebstein LSG	V	1,162	1968
Talsperre Pirk LSG	V	1,432	1940
Talsperre Pohl LSG	V	2,300	1962
Talsperre Quitzdorf und Kollmer Hohen LSG	V	4,417	1974
Templiner Seenkreuz LSG	V	11,500	1962
Teupitz-Koriser Seengebiet LSG	V	23,317	1966
Tharandter Wald LSG	V	5,440	1974
Thummlitzwald LSG	V	11,500	1984
Thuringer Wald LSG	V	151,613	1963
Thuringische Rhon LSG	V	61,500	1989
Tollense-Becken LSG	V	10,000	1962
Torgelower See LSG	V	3,000	1962
Triebischtaler LSG	V	1,940	1974
Uchte-Tangerquellen LSG	V	6,681	1975
Untere Havel LSG	V	21,940	1967
Wald- und Restseengebiet Dobern LSG	V	1,850	1968
Wald-u.Seengeb.z.Schwielochsee,Libe.u.Spree.LSG	V	3,850	1968
Walder um Greiz und Werdau LSG	V	5,525	1961
Waldgebiet Huy LSG	V	1,561	1939
Waldgebiet bei Crivitz u. Barniner See LSG	V	1,000	1964
Waldgebiet des Fallstein LSG	V	1,375	1939
Wallensteingraben LSG	V	2,000	1966
Wandlitz-Biesenthal-Prendener Seegebiet LSG	V	5,600	1965
Webellinsee-Grimnitzsee LSG	V	3,790	1965
Weidatalsperre LSG	V	1,680	1961
Wermisdorfer Forst LSG	V	13,000	1963
Westlausitz LSG	V	29,070	1974
Wiesen-und Teichgebiet Eulo und Jamno LSG	V	1,440	1968
Wiesen-und Teichlandschaft Kolkwitz-Hanchen LSG	V	2,020	1968
Wolltzeengebiet LSG	V	7,000	1965
Zeitgrund LSG	V	1,291	1958
Zichtauer Berge und Klotzer Forst LSG	V	10,800	1964
Zittauer Gebirge LSG	V	6,270	1958
Zuwachs-Kulzauer Forst LSG	V	5,040	1975

## National Parks of the Republic of Hungary

- 1 Aggtelek
- 2 Bukk
- 3 Hortobagy
- 4 Kiskunsag



Country/Site type/Name of Area	Category	Area (ha)	Year
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**Eastern Länder/FRG, contd ...**

*Biosphere Reserves*

Middle Elbe Biosphere Reserve	IX	17,500	1979
Vessertal Nature Reserve	IX	7,460	1979

## HUNGARY

*National Parks*

Aggtelek NP	V	19,708	1985
Bukk NP	V	38,815	1976
Hortobagy NP	V	52,000	1973
Kiskunsag NP	V	30,628	1975

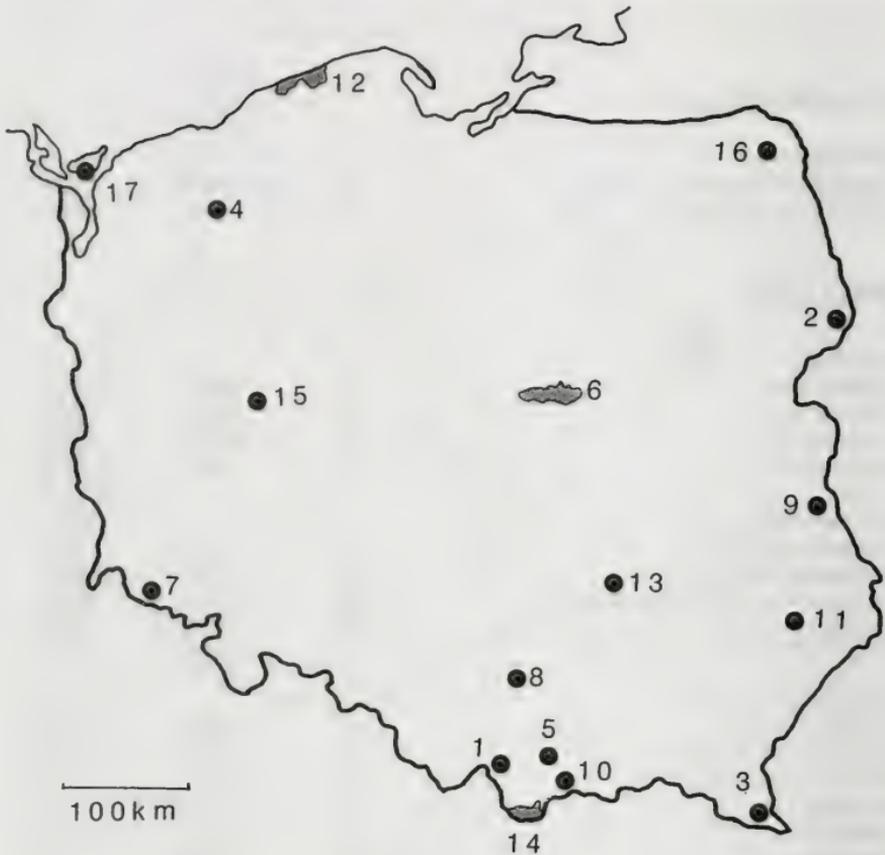
*Nature Conservation Areas*

Agota-puszta NCA	IV	4,700	1973
Nagyberek Feher-viz NCA	IV	1,537	1977
Pusztakoeci mocsarak (Egyek) NCA	IV	2,815	1973
Tiszadobi arter NCA	IV	1,000	1977
Tiszafuredi madarrezervatum NCA	IV	2,500	1973

*Landscape Protected Areas*

Badacsonyi LPA	V	7,028	1965
Barcsi osborokas LPA	V	3,417	1974
Beda-Kora-Pancrai LPA	V	6,497	1989
Borzsonyi LPA	V	17,897	1978
Budai LPA	V	10,234	1978
Devavanyai LPA	V	3,433	1975
Ferto-tavi LPA	V	12,542	1977
Gemenci LPA	V	17,779	1977
Gerecsei LPA	V	8,617	1977
Hajdöröségi LPA	V	5,680	1988
Hansági LPA	V	6,243	1976
Kali-medence LPA	V	9,110	1984
Kelet-Mecseki LPA	V	9,248	1977
Keszthelyi-TK LPA	V	2,711	1984
Kis-Balaton LPA	V	14,745	1986
Koszegi LPA	V	3,987	1980
Közep-Tiszai LPA	V	7,670	1978
Lazberci LPA	V	3,634	1986
Martelyi LPA	V	2,232	1971
Matrai LPA	V	11,862	1985
Ocsai LPA	V	3,575	1975

## National Parks of the Republic of Poland



- |              |                  |
|--------------|------------------|
| 1 Babia Gora | 11 Roztocze      |
| 2 Bialowieza | 12 Slowinski     |
| 3 Bieszczady | 13 Swietokrzyski |
| 4 Drawski    | 14 Tatra         |
| 5 Gorce      | 15 Wielkopolski  |
| 6 Kampinos   | 16 Wigierski     |
| 7 Karkonosze | 17 Wolinski      |
| 8 Ojcow      |                  |
| 9 Polesie    | ■ > 10,000ha     |
| 10 Pieniny   | ● < 10,000ha     |

Country/Site type/Name of Area	Category	Area (ha)	Year
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**Hungary, contd ...**

Orgovanyi LPA	V	2,953	1976
Orsegi LPA	V	37,911	1978
Pilisi LPA	V	23,323	1978
Pitvarai parztak LPA	V	3,156	1989
Pusztaszeri LPA	V	22,151	1976
Sarreti LPA	V	2,210	1985
Soproni LPA	V	4,905	1977
Szabadkigyosi LPA	V	4,773	1987
Szatmar-Beregi LPA	V	22,246	1982
Szentgyorgyvolgyi LPA	V	1,916	1976
Szigetkozi LPA	V	9,158	1987
Tihanyi LPA	V	1,100	1952
Tokaj-Bodrogzugi LPA	V	4,242	1985
Vertesi LPA	V	13,723	1976
Zempleni LPA	V	26,496	1984
Zselicsegi LPA	V	9,042	1976

*Biosphere Reserves*

Aggtelek Biosphere Reserve	IX	19,247	1979
Hortobagy National Park	IX	52,000	1979
Kiskunsag Biosphere Reserve	IX	22,095	1979
Lake Fertő Biosphere Reserve	IX	12,542	1979
Pilis Biosphere Reserve	IX	23,000	1980

**POLAND***National Parks*

Babia Gora NP	II	1,734	1933
Bialowieza NP	II	5,317	1932
Bieszczady NP	II	15,337	1973
Drawski NP	II	8,691	1990
Gorce NP	II	6,750	1981
Kampinos NP	II	35,486	1959
Karkonosze NP	II	5,563	1959
Ojcow NP	V	1,592	1956
Pieniny NP	II	2,329	1932
Poleski NP	II	4,813	1990
Roztocze NP	II	6,857	1974
Slowinski NP	II	18,247	1967
Swietokrzyski NP	II	5,906	1950

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Poland, contd ...</b>			
Tatra NP	II	21,164	1955
Wielkopolski NP	II	5,198	1933
Wigierski NP	V	14,840	1989
Wolinski NP	II	4,844	1960
<i>Nature Reserves</i>			
Czerwone Bagno NR (Faunal-Peatbog Reserve)	IV	11,630	1957
Jata NR (Floral Reserve)	IV	1,117	1952
Jeziro Dobskie NR (Landscape)	IV	1,833	1976
Jeziro Druzno NR (Bird Reserve)	IV	3,022	1967
Jeziro Kosno NR (Landscape)	IV	1,232	1982
Jeziro Nidzkie NR (Landscape)	IV	2,935	1973
Jeziro Siedmiu Wysp NR (Bird Reserve)	IV	1,000	1956
Kurianskie Bagno NR (Floral Reserve)	IV	1,714	1985
Las Warminski NR (Forest Reserve)	IV	1,798	1982
Lasy Janowskie NR (Forest Reserve)	IV	2,677	1984
Nadgoplanski Park Tysiaclecia NR (Landscape)	IV	12,684	1967
Paslece NR (Faunal Reserve)	IV	4,116	1970
Puszcza Bialowieska NR (Landscape)	IV	1,357	1969
Rzeka Drweca NR (Water Reserve)	IV	1,287	1961
Slonsk NR (Faunal-Peatbog Reserve)	IV	4,166	1977
Stawy Milickie NR (Bird Reserve)	IV	5,324	1963
Stawy Przemkowskie NR (Bird Reserve)	IV	1,046	1984
Wielki Bytyn NR	IV	1,826	1989
Wielki NR (Faunal Reserve)	IV	4,116	1970
<i>Obszar Chronionego Krajobrazu</i>			
Baltowskim OCK	VIII	5,100	1973
Busko-Zdroj OCK	VIII	20,400	1973
Checinsko-Malogoskim OCK	VIII	10,100	1973
Dolina Radwi OCK	VIII	3,560	1975
Dolina Wkry i dolnego biegu rzeki Lydyny OCK	VIII	51,400	1977
Jeziro Szczecineckie OCK	VIII	18,000	1975
Kieleckie OCK	VIII	57,500	1973
Koneckim OCK	VIII	19,500	1973
Koszalinski Pas Nadmorski OCK	VIII	48,330	1975
Obszar lesny na poludnie od Lidzbarka i Rybna OCK	VIII	60,000	1975
Okolice Kalisza Pomorskiego OCK	VIII	1,580	1975
Okolice Mlawy i Ilowa OCK	VIII	4,200	1975
Okolice Polanowa OCK	VIII	1,857	1975
Okolice Regimina OCK	VIII	3,800	1975
Okolice Zydowo-Bialy Bor OCK	VIII	12,350	1975

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Poland, contd ...</b>			
Pilicy OCK	VIII	7,000	1973
Pojezierze Drawskie OCK	VIII	100,053	1975
Srodkowy odcinek na prawnym brzegu Narwi OCK	VIII	6,600	1975
Staszowskim OCK	VIII	1,400	1973
Szydlowieckim OCK	VIII	2,900	1093
Wloszczowskim OCK	VIII	4,100	1973
Wschodnio-Beskidzki OCK	VIII	162,800	1972
Zagnansko-Suchedniowskim OCK	VIII	21,000	1973
<i>Landscape Parks</i>			
Bolimowski PK	V	25,900	1986
Brodnicki PK	V	22,240	1985
Chelmski PK	V	23,500	1983
Doliny Slupi PK	V	120,201	1981
Drawski PK	V	63,642	1979
Gor Opawskich PK	V	4,830	1988
Gory Sw. Anny PK	V	5,780	1988
Gostyn sko-Wloclawski PK	V	51,344	1979
Inski PK	V	51,843	1982
Kaszubski PK	V	34,544	1983
Kazimierski PK	V	38,670	1979
Kozienicki PK	V	45,535	1983
Krasnobrodzki PK	V	40,184	1988
Ksiazanski PK	V	4,500	1981
Lagowski PK	V	10,070	1985
Lasy Janowskie PK	V	62,950	1984
Mazowiecki PK	V	25,510	1986
Mazurski PK	V	69,219	1977
Mierzeja Wislana PK	V	22,390	1985
Nadmorski PK	V	27,610	1978
Narwianski PK	V	47,915	1985
Poleski PK	V	27,500	1983
Popradzki PK	V	78,000	1987
Przedborski PK	V	31,120	1988
Pszczewski PK	V	57,587	1986
Puszczy Knyszynskiej PK	V	125,349	1988
Puszczy Solskiej PK	V	115,246	1988
Slezanski PK	V	12,200	1988
Snieznicki PK	V	28,800	1981
Sobiborski PK	V	19,000	1983
Stolowogorski PK	V	13,600	1981
Strzelecki PK	V	10,300	1983

## National Parks of Romania



- 1 Apuseni
- 2 Bucegi
- 3 Caliman
- 4 Ceahliu
- 4 Cheile Carasului
- 6 Cheile Nerei-Beusnita
- 7 Cheile-Bicazului
- 8 Cozia
- 9 Domogled-Valea Cernei
- 10 Piatra Craiului
- 11 Retezat
- 12 Rodna

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Poland, contd ...</b>			
Suwalski PK	V	14,901	1976
Szczecinski PK	V	22,384	1982
Trojmiejski PK	V	33,107	1979
Tucholski PK	V	52,928	1985
Wdzydzki PK	V	17,650	1983
Wigierski PK	V	21,301	1976
Wzniesienie Elblaskie PK	V	33,292	1985
Zaleczanski PK	V	14,278	1979
Zespol Jurajskich PK	V	246,276	1980
Zespol Parkow Ponidzia PK	V	82,648	1986
Zespol Swietokrzyskie PK	V	100,625	1988
Zywiecki PK	V	57,587	1986
<i>Biosphere Reserves</i>			
Babia Gora National Park	IX	1,741	1976
Bialowieza National Park	IX	5,316	1976
Slowinski National Park	IX	18,069	1976
<i>World Heritage Sites</i>			
Bialowieza National Park	X	5,316	1979
<i>Proposed</i>			
Biebrzanski NP	PRO	(20,000)	
Mazurski NP	PRO	(36,000)	
Stolowogorski NP	PRO	(14,000)	
Szczecinski NP	PRO	(4,000)	

## ROMANIA

<i>National Parks</i>			
Apuseni NP	V	57,900	1990
Bucegi NP	V	35,700	1990
Caliman NP	V	15,300	1990
Ceahliu NP	V	17,200	1990
Cheile Carasului NP	V	30,400	1990
Cheile Nerei-Beusnita NP	V	37,100	1990
Cheile-Bicazului NP	V	11,600	1990
Cozia NP	V	17,100	1990
Domogled-Valea Cernei NP	V	60,100	1990
Piatra Craiului NP	V	14,800	1990
Retezat NP	II	54,400	1935

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Romania, contd ...</b>			
Rodna NP	V	56,700	1990
<i>Nature Reserves</i>			
Bicaz (narrow Gorge) and Lacul Rosu NR	IV	5,369	1955
Bucegi NR	V	3,748	1943
Caliman NR	IV	1,625	
Cheile Bicazului NR	IV	3,241	1955
Cheile Carasului NR	IV	1,025	1982
Cheile Nerei-Beusnita NR	IV	11,098	1943
Cozia NR	IV	7,284	
Padurea-Letea NR	IV	5,212	1938
Perisor-Zatoane-Sacalin NR	V	16,400	1961
Periteasca-Gura Portita NR	IV	3,900	1961
Piatra Craiului NR	IV	1,459	1958
Pietrile Boghii-Pietroasa NR	IV	1,737	1971
Pietrosu Mare NR	IV	5,865	1932
Rosca-Buhaiova-Hrecisca NR	I	14,600	1961
Rosca-Letea NR	IV	16,400	1961
Saritoarea Bohodeiului NR	IV	1,950	1981
Scarisoara-Belioara NR	IV	6,507	1941
Sesul Craiului-Belicara NR	IV	6,507	1941
Sfintu Gheorghe-Perisor-Palade NR	IV	15,000	
Snagov Forest and Snagov Lake NR	IV	1,767	1952
<i>Nature Parks</i>			
Gradistea Muncelului-Cioclovina NatP	V	6,030	1979
<i>Forest Reserves</i>			
Ceahlau-Politele cu crini FoR	IV	5,424	1955
Domogled-Tesna-Virful lui Stan FoR	IV	5,991	1932
Tismana FoR	VIII	1,251	1982
<i>Biosphere Reserves</i>			
Pietrosul Mare Nature Reserve	IX	3,068	1979
Retezat National Park	IX	20,000	1979
Rosca-Letea Reserve	IX	18,145	1979
<i>Unclassified</i>			
Bila-Lala NR	IV	5,135	1973
<i>Proposed</i>			
Delta Dunarii NP	PRO	(220,000)	

Country/Site type/Name of Area	Category	Area (ha)	Year
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**Romania, contd ...**

Drocea NP	PRO	(17,000)	
Histria (Grindul Lupilor Marchelul) NR	PRO	(1,410)	

**UNION OF SOVIET SOCIALIST REPUBLICS***Biosphere Reserves*

Biosphere Reserve of the West Estonian Archipelago	IX	1,560,000	1990
Lake Baikal Region Biosphere Reserve	IX	559,100	1986

**U.S.S.R. - Armenia S.S.R.***National Parks*

Sevan NP	II	150,000	1978
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*Zapovedniki*

Dilzhanskiy Z	I	24,232	1958
Khosrovskiy Z	I	29,680	1958
Shikaokhskiy Z	I	18,000	1975

**U.S.S.R. - Azerbaydzhan S.S.R.***Zapovedniki*

Ak-Gel'skiy Z	I	4,400	1978
Geigel'skiy Z	I	7,131	1926
Girkanskiy Z	I	2,904	1969
Ilisuinsky Z	I	9,345	1987
Ismailinskiy Z	I	5,778	1981
Karayazskiy Z	I	4,155	1978
Kyzyl-Agachskiy Z	I	88,360	1929
Pirkulinskiy Z	I	1,520	1968
Shirvanskiy Z	I	17,745	1969
Turianchaiskiy Z	I	12,634	1958
Zakatal'skiy Z	I	23,843	1930

**U.S.S.R. - Byelorussian S.S.R.***Zapovedniki*

Berezinskiy Z	I	76,201	1925
Prypyatskiy Z	I	62,213	1969

## National Parks of the Western Republics of the Soviet Union



- |                           |                |
|---------------------------|----------------|
| <b>Estonian S.S.R.:</b>   | 3 Lakhemaaskiy |
| <b>Latvian S.S.R.:</b>    | 1 Gauya        |
| <b>Lithuanian S.S.R.:</b> | 4 Lithuanian   |
| <b>Ukrainian S.S.R.:</b>  | 2 Karpatskiy   |
|                           | 5 Shatskiy     |

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Byelorussian S.S.R., contd ...</b>			
<i>Hunting Reserves</i>			
Belovezhskaya Pushcha HR	IV	87,577	1940
Telekhanskoye HR	IV	10,947	1977
<i>Biosphere Reserves</i>			
Berezinskiy Zapovednik	IX	76,201	1978
<b>U.S.S.R. - Estonia S.S.R.</b>			
<i>National Parks</i>			
Lakhemaaskiy NP	II	64,911	1971
<i>Zapovedniki</i>			
Endlaskiy Z	I	8,162	1985
Matsaluskiy Z	I	39,697	1957
Nigulasskiy Z	I	2,771	1957
Vil'sandiyskiy Z	I	10,689	1910
Viydumyaeskiy Z	I	1,194	1957
<b>U.S.S.R. - Georgia S.S.R.</b>			
<i>National Parks</i>			
Tbilisskiy NP	II	19,410	1973
<i>Zapovedniki</i>			
Adzhametskiy Z	I	4,848	1957
Akhmetkiy Z	I	16,297	1980
Algetskiy Z	I	6,000	1965
Borzhomskiy Z	I	18,048	1959
Kazbegskiy Z	I	8,707	1976
Kintrishskiy Z	I	13,893	1959
Lagodekhskiy Z	I	17,818	1912
Liakhvskiy Z	I	6,385	1977
Mariamdzhvarskiy Z	I	1,040	1959
Pitsyundo-Myusserskiy Z	I	3,761	1966
Pskhu-Gumistinskiy Z	I	40,819	1976
Ritsinskiy Z	I	16,289	1957
Saguramskiy Z	I	5,247	1946
Vashlovanskiy Z	I	8,034	1935

## National Parks of the Central and Eastern Republics of the Soviet Union



- 1 Ala-Aroha
- 2 Losinyy Ostrov
- 3 Pribaikalski
- 4 Samarskaya Luka
- 5 Sochinskiy
- 6 Sevan
- 7 Tbilisskiy
- 8 Uzbekskey (Uzbekistan People's Park)
- 9 Zaibaikalski

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>U.S.S.R. - Kazakhstan S.S.R.</b>			
<i>National Parks</i>			
Bayanaul'sky NP	II	45,500	1985
<i>Zapovedniki</i>			
Aksu-Dzhabagly Z	I	75,094	1927
Alma-Atinskiy Z	I	73,342	1961
Barsakel'messkiy Z	I	18,300	1939
Kurgal'dzhinskiy Z	I	237,138	1968
Markakol'skiy Z	I	75,040	1976
Naurzumskiy Z	I	87,694	1934
Ustiyurtskiy Z	I	223,300	1984
<i>Ramsar Wetland Sites</i>			
Kourgal'dzhin and Tengiz Lakes RW	R	260,500	1976
Lakes of the Lower Turgay and Irgiz RW	R	348,000	
<b>U.S.S.R. - Kirghizia S.S.R.</b>			
<i>National Parks</i>			
Ala-Archa NP	II	19,400	1976
<i>Zapovedniki</i>			
Besh-Aral'skiy Z	I	116,732	1979
Issyk-Kul'skiy Z	I	18,999	1948
Narynskiy Z	I	18,260	1983
Sary-Cheleksiye Z	I	23,868	1959
<i>Ramsar Wetland Sites</i>			
Issyk-kul Lake RW	R	629,800	
<i>Biosphere Reserves</i>			
Chatkal Mountains Biosphere Reserve	IX	71,400	1978
<b>U.S.S.R. - Latvia S.S.R.</b>			
<i>National Parks</i>			
Gauya NP	II	83,750	1973
<i>Zapovedniki</i>			
Grini Z	I	1,477	1957

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Latvia S.S.R., contd ...</b>			
Krustkalny Z	I	2,902	1977
Slitere Z	I	15,037	1921
Teychi Z	I	19,047	1982
<b>U.S.S.R. - Lithuania S.S.R.</b>			
<i>National Parks</i>			
Lithuanian SSR NP	II	30,000	1974
<i>Zapovedniki</i>			
Chapkyalyay Z	I	8,477	1975
Kamanos Z	I	3,650	1979
Zhuvintas Z	I	5,457	1946
<b>U.S.S.R. - Moldavia S.S.R.</b>			
<i>Zapovedniki</i>			
Kodry Z	I	5,177	1971
Redenskiy Les Z	I	5,664	1976
<b>U.S.S.R. - R.S.F.S.R.</b>			
<i>National Parks</i>			
Bashkiriya NP	II	98,134	1986
Losiny Ostrov NP	II	10,058	1983
Mariy Chodra NP	II	36,600	1985
Pribaikalskiy NP	II	412,750	1986
Priel'brusskiy NP	II	101,000	1986
Samarskaya Luka NP	II	128,000	1984
Sochinskiy NP	II	190,000	1983
Zabaikalskiy NP	II	269,300	1986
<i>Zapovedniki</i>			
Altaiskiy Z	I	881,238	1968
Astrakhanskiy Z	I	63,400	1919
Azas Z	I	337,290	1985
Baikalo-Lenskiy Z	I	659,919	1986
Barguzinskiy Z	I	263,200	1916
Bashkirskiy Z	I	79,609	1930

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>R.S.F.S.R., contd ...</b>			
Bassegi Z	I	19,422	1982
Baykal'skiy Z	I	165,724	1969
Bol'shekhkhtsizskiy Z	I	45,123	1963
Bryanskiy Les Z	I	11,778	1987
Bureinskiy Z	I	358,444	1987
Dagestanskiy Z	I	19,061	1987
Dal'nevostochnyy Z	I	64,316	1978
Darvinskiy Z	I	112,630	1945
Dauzsky Z	I	631,300	1986
Il'menskiy Z	I	30,380	1920
Kabardino-Balkarskiy Z	I	74,099	1976
Kandalakshskiy Z	I	58,100	1932
Kavkazskiy Z	I	263,277	1924
Kedrovaya Pad' Z	I	17,897	1916
Khinganskiy Z	I	97,836	1963
Khoperskiy Z	I	16,178	1935
Kivach Z	I	10,460	1931
Komsomol'skiy Z	I	63,866	1963
Kostomukhskiy Z	I	47,457	1983
Kronotskiy Z	I	1,099,000	1967
Kuril'skiy Z	I	65,365	1984
Laplanskiy Z	I	278,436	1930
Lazovskiy Z	I	116,524	1957
Les na Vorskley Z	I	1,038	1979
Magadanskiy Z	I	883,805	1982
Malaya Sos'va Z	I	92,921	1976
Mordovskiy Z	I	32,148	1935
Nizhne-Svirskiy Z	I	40,972	1980
Okskiy Z	I	22,911	1935
Olekminskiy Z	I	847,102	1984
Ozenbuzgskiy Z	I	21,653	1989
Pechoro-Ilychskiy Z	I	721,322	1930
Pinezhskiy Z	I	41,244	1975
Pozonaitskiy Z	I	56,669	1988
Prioksko-Terrasnyy Z	I	4,945	1948
Putozanskiy Z	I	1,887,251	1988
Sayano-Shushenskiy Z	I	390,368	1976
Severo-Osetinskiy Z	I	28,999	1967
Shul'gan Tash Z	I	22,531	1986
Sikhote-Alinskiy Z	I	347,052	1935
Sokhondinskiy Z	I	211,007	1973
Stolby Z	I	47,154	1925

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>R.S.F.S.R., contd ...</b>			
Taymyrskiy Z	I	1,348,708	1979
Teberdinskiy Z	I	84,996	1936
Tsentral'nochernozemnyy Z	I	4,847	1969
Tsentral'novesnoy Z	I	21,380	1931
Tsentralno-Sibirskiy Z	I	972,017	1985
Ussuriyskiy Z	I	40,432	1932
Ust'Lenskiy Z	I	1,433,000	1986
Verkhne-Tazovskiy Z	I	631,308	1986
Visimskiy Z	I	13,750	1971
Vitimskiy Z	I	585,021	1982
Volzhsko-Kamskiy Z	I	8,034	1960
Voronezhskiy Z	I	31,053	1927
Vrangel Island Z	I	795,650	1976
Yuganskiy Z	I	648,636	1982
Yuzhno-Uzalskiy Z	I	254,914	1978
Zavidovskiy Z	I	125,442	1972
Zeyskiy Z	I	82,567	1963
Zhigulevskiy Z	I	23,140	1966
<b>Biosphere Reserves</b>			
Astrakhanskiy Zapovednik	IX	63,400	1984
Barguzinskiy Zapovednik	IX	263,176	1916
Kavkazskiy Zapovednik	IX	263,477	1978
Kronotskiy Zapovednik	IX	1,099,000	1984
Laplandskiy Zapovednik	IX	278,400	1984
Oka River Valley Biosphere Reserve	IX	45,845	1978
Pechoro-Ilychskiy Zapovednik	IX	721,322	1984
Sayano-Shushenskiy Zapovednik	IX	389,570	1984
Sikhote-Alin Zapovednik	IX	340,200	1978
Sokhondinskiy Zapovednik	IX	211,000	1984
Tsentral'nochernozem Zapovednik	IX	4,795	1978
Tsentral'nolesnoy Zapovednik	IX	21,348	1985
Tsentralnosibirskii Biosphere Reserve	IX	5,000,000	1986
Voronezhskiy Zapovednik	IX	31,053	1984
<b>U.S.S.R. - Tadzhikistan S.S.R.</b>			
<b>Zapovedniki</b>			
Dashti-Dzhumskiy Z	I	19,700	1983
Ramit Z	I	16,168	1959
Tigrovaya Balka Z	I	49,700	1938

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>U.S.S.R. - Turkmenistan S.S.R.</b>			
<i>Zapovedniki</i>			
Amu-Dar'inskiy Z	I	50,506	1982
Badkhyzskiy Z	I	87,680	1941
Kaplankyrskiy Z	I	570,000	1979
Kopetdagskiy Z	I	49,793	1976
Krasnovodskiy Z	I	262,037	1928
Kugitangskiy Z	I	27,100	1986
Repetekskiy Z	I	34,600	1928
Syunt-Khasardagskiy Z	I	29,700	1976
<i>Ramsar Wetland Sites</i>			
Krasnovodsk and North-Cheleken Bay RW	R	188,700	
<i>Biosphere Reserves</i>			
Repetek Zapovednik	IX	34,600	1978
<b>U.S.S.R. - Ukrainian S.S.R.</b>			
<i>National Parks</i>			
Karpatskiy NP	II	50,303	1980
Shatskiy NP	II	82,500	1983
<i>Zapovedniki</i>			
Askaniya Nova Z	I	11,054	1921
Chernomorskiy Z	I	71,899	1927
Dunaiskie Plavni Z	I	14,851	1981
Kanevskiy Z	I	1,030	1968
Karadagskiy Z	I	1,370	1979
Karpatskiy Z	I	18,544	1968
Luganskiy Z	I	1,580	1968
Polesskiy Z	I	20,104	1968
Rastoch'e Z	I	2,080	1984
Ukrainskiy Stepnoy Z	I	1,634	1961
Yaltinskiy Z	I	14,591	1973
<i>Hunting Reserves</i>			
Azovo-Sivashskoye HR	IV	57,430	1957
Dneprovsko-Teterevskoye HR	IV	37,891	1967
Krymskoye HR	IV	42,957	1957
Zalesskoye HR	IV	35,089	1957

## National Parks of the Socialist Federal Republic of Yugoslavia



Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Ukrainian S.S.R., contd ...</b>			
<i>Biosphere Reserves</i>			
Askaniya-Nova Zapovednik	IX	33,307	1985
Chernomorskiy Zapovednik	IX	87,348	
<b>U.S.S.R. - Uzbekistan S.S.R.</b>			
<i>National Parks</i>			
Uzbekistan People's Park NP	II	31,503	1978
<i>Zapovedniki</i>			
Baday-Tugay Z	I	5,929	1971
Chatkal'skiy Z	I	35,686	1947
Gissarskiy Z (Kyzylsuyskiy & Mirakinskiy)	I	87,538	1983
Kitabskii Z	I	5,378	1979
Kyzylkumskiy Z	I	10,141	1971
Nuratinskiy Z	I	22,537	1975
Suzkhanskiy Z	I	28,014	1986
Zaaminskiy Z	I	15,600	1959
Zeravshanskiy Z	I	2,352	1975

## YUGOSLAVIA

<i>National Parks</i>			
Biogradska Gora NP	II	3,400	1952
Brioni NP	V	4,660	1983
Djerdap NP	V	63,500	1983
Durmitor NP	II	33,000	1952
Fruska Gora NP	V	25,398	1960
Galicica NP	II	22,750	1958
Kopaonik NP	II	11,800	1981
Kornati NP	II	22,400	1980
Kozara NP	V	3,375	1967
Krka River NP	II	14,200	1985
Lovcen NP	II	2,400	1952
Mavrovo NP	II	73,088	1949
Mljet NP	II	3,100	1960
Paklenica NP	II	3,617	1949
Pelister NP	II	12,500	1948
Plitvice Lakes NP	V	19,172	1949
Risnjak NP	II	3,014	1953

Country/Site type/Name of Area	Category	Area (ha)	Year
<i>Yugoslavia, contd ...</i>			
Sara NP	II	39,000	1986
Skadarske jezero NP	II	40,000	1983
Sutjeska NP	II	17,250	1965
Tara NP	II	19,175	1981
Triglav NP	II	84,805	1981
<i>Nature Reserves</i>			
Bijele i Samarske Stijene NR	I	1,175	1985
Deliblatska Pescara NR	V	29,352	1965
Hajducki i Rozanski Kukovi NR	I	1,220	1969
Jorgov kamen NR	IV	1,500	1988
Kopacki Rit NR	I	7,200	1967
Korab NR	IV	2,601	1988
Kotorsko Risanski Zaliv NR	V	12,000	1979
Malostonski Zaljev NR	I	10,389	1983
Neretva Delta NR	IV	1,200	
Obedska Bara NR	V	17,501	1968
Obedska bara Kod Kupinova III NR	IV	16,133	1968
Ohrid (Ohridsko) jezero NR	IV	38,000	1958
Otok Krk Rta Glavine do Uvale Mala Luka NR	IV	1,000	1969
Planina Vodno NR	IV	2,840	1970
Prasuma perucica NR	IV	1,434	1954
Senecka planina NR	IV	1,953	1988
Veliki i Mali Strbac ra Trajonovum tablom NR	I	1,124	1975
Zvijezda NR	V	2,007	1950
<i>Natural Monuments</i>			
Djalovica Klisura NM	III	1,600	1968
Djavalja varos NM	I	1,400	1959
Dojran NM	III	2,730	1970
Markovi Kuli NM	III	5,285	1967
Ohridsko jezero NM	III	23,000	1958
Prespanske jezero NM	III	17,680	1977
Rugovska klisura NM	I	4,301	1988
Suma od Krivulj na Jakusici NM	III	1,000	1970
<i>Landscape Parks</i>			
Robanov Kot LP	V	1,580	1987
Topla LP	V	1,345	1966
Velebit RNaP	VIII	200,000	1981
Vidova gora LP	V	1,800	1970
Zvecevo na papuku LP	V	2,586	1966

Country/Site type/Name of Area	Category	Area (ha)	Year
<b>Yugoslavia, contd ...</b>			
<i>Historical Sanctuaries</i>			
Selo Trsic i okolina marastira HS	V	1,308	1965
<i>Regional Nature Parks</i>			
Biokovo RNaP	V	19,550	1981
Gornje Podunavlje RNaP	V	10,325	1982
Grmija RNaP	IV	1,126	1987
Kopacki Rit (Kopacevo Marshes) RNaP	VIII	10,510	1976
Palic-Ludas RNaP	V	6,360	1982
Panonija RNaP	VIII	3,937	1975
Rajac RNaP	VIII	1,200	1963
Resava RNaP	V	10,000	1957
Stari Begej RNaP	V	1,327	1986
Suboticka suma RNaP	VIII	4,431	1982
Tribevic RNaP	V	1,000	1954
Visacke planine RNaP	VIII	4,177	1982
Zahorina RNaP	V	2,000	1954
Zvijezda na Planini Tara RNaP	V	1,893	1971
<i>Specially Protected Areas</i>			
Brioni National Park and Commemorative Site (SpPA)	SPA	4,000	1983
Kornati Islands National Park (SpPA)	SPA	6,900	1980
Krka National Park (SpPA)	SPA	14,200	1985
Limski zaljev Nature Reserve (SpPA)	SPA	1,473	1979
Malostonski Zaljev Nature Reserve (SpPA)	SPA	10,389	1983
Mljet National Park (SpPA)	SPA	4,619	1961
Neretva Delta Nature Reserve (SpPA)	SPA	7,430	1954
Paklenica National Park (SpPA)	SPA	3,616	1954
<i>Biosphere Reserves</i>			
Reserve ecologique du Bassin de la Riviere Tara	IX	200,000	1976
Velebit Mountain	IX	150,000	1977
<i>World Heritage Sites</i>			
Durmitor National Park	X	32,000	1980
Kotor WHS	XC	12,000	1979
Ohrid	X	38,000	1979
Plitvice Lakes National Park	X	19,200	1979

# IUCN - The World Conservation Union

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