

Chapter 8

BIODIVERSITY CONSERVATION AND FOREST PROTECTION

8.1 Present state of nature

Introduction

Albania's natural environment is suffering from the adverse impacts of unsustainable agricultural and forestry practices, as well as from industrial pollution and uncontrolled building. Since the 1950s, the forest area has decreased from 45 per cent to 36 per cent of the territory, with consequent soil erosion. Wetlands too have been drained and reclaimed, changing most of the habitats permanently.

Nature conservation policy has developed since the democratic changes of 1990, but it has faced the difficulties that are typical of countries in transition, although more severely so in Albania due to its long isolation and the economic crisis of 1997. Since then, much effort has been put into institutional and legal development. Nature protection legislation is still changing, and should be harmonized with international standards. The National Report on the Convention on Biological Diversity - and the Biodiversity Strategy and Action Plan were issued, and Albania has become a Party to six international conventions on biodiversity conservation (Biodiversity, Ramsar, Desertification, Bern, Bonn and Barcelona Conventions – see Chapter 3). It is preparing to accede to two other instruments (CITES and the Pan-European Biological and Landscape Diversity Strategy). International organizations and various donors have supported this process.

Geography and habitats

Albania is a Mediterranean country on the Balkan Peninsula. Its coastline is 476 km long, with a Mediterranean climate that penetrates the hinterland along the river valleys. Precipitation ranges between 650 mm in the southern part of the pre-mountain zone, and 4000 mm in the alpine zone. Mountainous terrain prevails in the country,

the highest mountain being Korabi (2751 m above sea level). Most mountains are sedimentary and volcanic formations; though some are metamorphic. Alluvial plains, glaciers, marshes and lakes originated in the Quaternary age. The surface hydrographic network is complex. It consists of a dozen significant rivers and 274 either natural or artificial lakes. All these elements shape Albania's habitats.

The main habitat types and subtypes are:

- Coastal communities, which comprise marine communities, marine wetlands, coastal sands, and dunes and seaside rocky coast (see Box 8.1);
- Non-maritime waters, which comprise coastal wetland water (including brackish water) and freshwater bodies (see Box 8.1).

The coastal wetlands and lakes are important sites for the wintering of migratory species (particularly waterfowl). As coastal communities and non-maritime waters are important biological assets, they have been proposed for introduction into the future enlarged protected area network (Box 8.1).

- Bushes form several habitat subtypes, such as temperate heath grove, garrigue, maquis, alpine and sub-alpine habitats;
- Forests are spread over five phyto-climatic zones: (1) the Mediterranean shrub zone with broad-leaved and conifer species, as well as the (2) oak, (3) beech, (4) fir and (5) alpine zones. They cover about 36 per cent of the country (1,030,230 ha) (Box 8.2). Broad-leaved species dominate the forest fund (Table 8.1);
- Pastures occupy mainly meadows, alpine and sub-alpine zones over about 400,000 ha. Sixty per cent of that area is classified as “winter pastures” covering lowland areas up to 1,500 m altitude; the remainder is “summer pasture” at higher altitudes (up to 2,500 m and higher), including alpine vegetation.

Box 8.1: Proposal for introducing the "Shkumbini river outlet - Divjaka - Karavasta - Semani river outlet" national park into the network of protected areas

Proposed area: 8000 ha
 Administration: Lushnjë and Kavajë districts
 Current status: National park (1250 ha, Divjaka forest); strict nature reserve (5000 ha, Karavasta lagoon); managed nature reserve (815 ha, Kular)
 Proposed status: Under the network of protected areas, the entire area is proposed as a national park

It is undoubtedly the area that deserves the highest protection status, as it contains the river delta, a lagoon, sand dunes, psammophyte, halophyte, hydrophyte and hygrophyte vegetation, pine forests with *Juniperus monocarpa*, three endemic plant species of *Orchis* sp. and *Aster* sp., and *Lutra lutra*. Over 45,000 wintering water birds of about 70 species can be found, giving the area regional and global importance. It provides breeding sites for the globally threatened *Pelecanus crispus*. The area was the first in Albania to be recognized as a Ramsar site. Additionally, it contains an archaeological and historic heritage, thus providing the basis for Eco-tourism development. A management concept for the area has been developed under an EU PHARE project.

Source: *Nature, Landscape and Biodiversity Conservation in Albania, REC, 1997.*

Table 8.1: Structure of forest fund

TYPES	Area (ha)	% of total	Volume	
			(thousand m ³)	% of total
TOTAL	1,044,640	100.0	82,820	100.0
CONIFEROUS, Total	176,070	16.8	18,690	22.6
Black pine	109,840	10.5	11,183	13.5
Fir	16,730	1.5	3,936	4.8
Cluster pine	34,980	3.3	1,023	1.2
Other	15,020	1.5	2,548	3.1
DECIDUOUS, Total	600,680	57.5	56,894	68.7
Beech	194,850	18.6	38,175	46.1
Oak	330,760	31.7	14,455	17.5
Poplar	1,370	0.1	87	0.1
BUSHES, Total	267,890	25.7	7,236	8.7
Strawberry tree	59,440	5.7	2,180	2.6
Hornbeam	92,170	8.8	3,026	3.6
Other	116,280	11.2	2,030	2.5

Source : General Directorate of Forest and Pastures. State of the Environment report, 1997-1998.

Mountainous ecosystems occupy most of the hinterland. The biodiversity in the western part of the country, bordering with Yugoslavia, is also highly significant; therefore this land has been proposed in the enlargement of protected areas (see Box 8.2).

Apart from the terrestrial ecosystems (alpine pastures and meadows, continental and glacial lakes, oak and conifer forests), marines ecosystems and habitats (medium and infralittoral level), coastal ecosystems (sand dunes, delta rivers, alluvial and wet forests, lagoons and coastal lakes) are also endangered. The coastal wetlands and lakes are wintering places for migratory bird species.

Four of them (Karavasta, Narta, Shkodra and Ohrid) have international importance as they shelter more than 20,000 waterfowl species each. However, only Karavasta is classified as a Ramsar site.

Flora and fauna

There are about 3,200 vascular plant species and 756 vertebrate species in Albania. These data are mostly based on case studies and historical information, since there is no inventory or monitoring of species and ecosystems. The numbers of species by taxonomic group are presented in Table 8.2.

Box 8.2: Proposal for including the "Livadhi i Harushes - Tethi – Valbona and Gashi river" protected area into the network of protected areas

Proposed area: 35,000 ha
 Administration: Malsi e Madhe, Shkodër and Tropojë districts
 Current status: Parts of this area have been proclaimed forest national parks (Tethi forest national park 2300 ha; Valbone forest national park 8000 ha, and strict nature reserve Gashi 3000 ha).
 Proposed status: All three areas (now protected as national parks) of some 35,000 ha located in the northern Alps of Albania (including the protected sites of Tethi, Valbone and Gashi) are proposed to be included into the network of protected areas.

It is a transboundary area with Yugoslavia (Serbia and Montenegro). Karst forms, with various high and sharp peaks, ranging from 2000 to 2600 m above sea level. Pine, fir, beech, chestnut forests, extended sub-alpine and alpine meadows and pastures cover the area. Big game, such as bear, wolf, lynx, chamois and wild boar inhabit it. The Valbona and Shala rivers provide a habitat for the globally endangered otter. This beautiful landscape could also become a tourist destination.

Source: *Nature, Landscape and Biodiversity Conservation in Albania, REC, 1997.*

Table 8.2: Number of species by taxonomic group

Taxonomic group	Albania	World
Bacteria	Unknown	>4,000
Viruses	Unknown	>5,000
Protozoa	Unknown	>40,000
Algae	600	>40,000
Fungi	800	>70,000
Ferns	45	>12,000
Bryophytes	500	>14,000
Lichens	400	>17,000
Flowering plants	3,200	250,000
Molluscs	520 (700)	80,000
Insects	4,000 (14,000)	1,000,000
Crustaceans	115	8,000
Echinodermata	46	5,600
Marine fish	249	23,000-30,000
Freshwater fish	64	8,500
Amphibians	15 (16)	4,000
Reptiles	36 (38)	6,500
Birds	323 (335)	9,881
Mammals	70 (84)	4,327

Source: Biodiversity Strategy and Action Plan, 1999.

Note: The number in parentheses indicates the expected number of species.

Endangered and endemic species

About 91 fauna species are assessed as globally threatened, of which 21 are mammal, 18 bird, 4 reptile, 2 amphibian, 28 fish, and 18 invertebrate species. Deer (*Cervus elaphus*) is extinct, while bear (*Ursus arctos*), wolf (*Canis lupus*), lynx (*Lynx lynx*), jackal (*Canis aureus*), chamois (*Rupicapra rupicapra*), roe deer (*Capreolus capreolus*), and wild boar (*Sus scrofa*) are particularly endangered

by poaching. Five bird species are categorized as vulnerable, such as the curly pelican and the king quail. Some species of other terrestrial taxonomic groups (amphibians, reptiles, insects), as well as marine ones (fish species, molluscs, coral), are also endangered.

There are 27 plant species with 150 subspecies that are endemic to Albania, and another 160 plant species that are endemic to Albania, the former Yugoslav Republic of Macedonia, Greece and Yugoslavia. Endemic fauna species are generally less well known, although they are well studied in some particular areas, such as Lake Ohrid, where about 40 molluscs and 2 endemic fish species have been studied in detail.

The flora is mainly endangered by the reduction in habitat areas (particularly wetlands and forests due to agriculture), and by direct damage to or removal of particular species. Illegal logging, mostly for fuel, poses a serious threat to some forest species. The collecting of spice and medicinal plants – laurel leaves, mountain tea, common sage, wild marjoram, rockweed – is widespread.

The Red Books on endangered, rare and endemic plant and animal species were completed and published in the period 1995 - 1997. The number of animal species included in the Red Book for Fauna is around 573, including 273 species of vertebrates or 36 per cent of the country's total. The Red Book for Flora lists 320 species of flowering plants, 45 of mushrooms and 25 of marine plants. Both Red Books should be updated and based on a biodiversity inventory and monitoring, as defined in the Biodiversity Strategy and Action Plan.

Table 8.3: Structure of land use

Land use	1950		1990		1995		1997	
	Thousand ha	%	Thousand ha	%	Thousand ha	%	Thousand ha	%
Total	2,875	100	2,875	100	2,875	100	2,875	100
Agriculture	391	14	704	24	702	24	700	24
Forest	1,282	45	1,045	36	1,052	36	1,026	36
Pasture	816	28	417	15	428	16	445	15
Other	386	13	709	25	693	24	704	25

Source: Ministry of Agriculture and Forestry (Department of Statistics), 2002.

8.2 Pressures on nature

Land use changes

According to the State-of-the-Environment Report, almost 30 per cent of the forestland and about half the pastureland were turned into cultivated land between 1960 and 1980. As a result of the socialist central planning system that based its economic development on intensive agriculture, the area of agricultural land was almost doubled in this period, thus reducing the area of natural ecosystems (table 8.3).

Urbanization and uncontrolled land use occurred mainly in the past decade. General poverty has caused a significant migration of the population from rural areas into urban centres. It has resulted in an increase of illegal buildings throughout the country, but particularly in the coastal zone. Illegal houses have been built not only on land areas but also on forest (table 8.4), pasture and agricultural lands, changing their characteristics irreversibly.

This problem is a result of the lack of proper physical plans, and insufficient control of the application of land and building legislation. In 2001, the Government took some serious steps to control illegal building (i.e. it started to demolish illegal buildings in public city areas). The development of physical plans is a national priority, which should be based on an integrated approach to nature conservation and sustainable land use.

Agriculture

Since the 1960s, agriculture has had the strongest adverse impact on biodiversity in Albania. According to the Biodiversity Strategy and Action Plan, the drainage and reclamation of swamps (250,000 ha), deforestation for new agricultural land (290,000 ha), terracing and the establishment

Table 8.4: Buildings in forest land, 1997

Contraventions	Number of	
	Cases	Surface, ha
Total	745	531
With approval	191	224
Without approval	554	307
Prosecuted	358	..
Penal	225	..
Administratively	133	..

Source: State of the Environment Report, 1997-1998.

of fruit tree plantations, and the cultivation of pastures were all widespread. They were 'justified' by the economic requirements of both extensive and intensive agricultural developments, but have resulted either in the loss or the degradation of ecologically important ecosystems, particularly forests, pastures and wetlands.

Overgrazing has posed a significant threat to ecosystems, since the pasture area decreased from 816,000 ha in 1950 to 445,000 ha in 1997 and can no longer maintain the national flock of about 3 million sheep and goats, which therefore have overgrazed pasture and forest areas, thus damaging forest regeneration (see Chapter 10).

Forestry

Forestry as a sector that uses forest resources is faced with both deforestation and the management problems of its own institutions and agencies undergoing transition. Deforestation is one of the major environmental problems, particularly in peri-urban and rural forests (easily accessible forest areas). Rural poverty, especially during the economic collapse in 1997, caused severe forest damage by illegal logging. It was reported that in 1999 the General Directorate for Forests and

Pastures sold only about 30 per cent of all timber and 40 per cent of all firewood; the rest was cut illegally. In 1997 alone, 5,494 fines for illegal logging were registered for an estimated damage of 232 million leks. Overall, the forest has declined from 45 per cent to 36 per cent in the past half-century.

The companies that harvest forests are mainly private. The General Directorate does not set any conditions on cutting technology and methodology to contractors; thus harvesting is not performed according to good forestry practices. Current forest management is based on outdated plans. It was reported that private companies were drawing up new forest management plans (10 of the 36 were completed by the time of the EPR mission). Scientific forestry institutions were not involved in the preparatory process.

Minor produce from forests is very important for the country's economy. According to the Environmental Centre for Administration and Technology, Albania is one of the most important suppliers and traders of medicinal plants in Europe. In 1995, 7,962,763 kg of medicinal plants were exported. In 1997 the amount decreased to 6,220,852 kg, but still earned Albania 1.8 billion leks. Since 1995, the uncontrolled collection of these plants has increased, while cultivation has decreased, thus leading to over-exploitation and biodiversity degradation.

To improve the forestry sector, the General Directorate issued the Strategy for the Development of the Forestry and Pasture Sector in Albania – Action Plan, in 2001. There are six main forest policy goals:

- To maintain the integrity of the forests and pastures;
- To promote sustainable natural resource management;
- To promote the transition to a market-driven economy;
- To transfer management responsibility for selected State forests and pastures to the local government;
- To improve State management of production forests and the summer pasture resource base; and
- To develop recreation and tourism opportunities in forests and protected areas.

To resolve the forestry and environmental problems, the Forestry Project was established with the support of the World Bank, the Food and Agriculture Organization of the United Nations (FAO) and other international organizations, to provide financial, technical and scientific assistance to the Albanian Government. Rehabilitation of degraded forests is reported to be slow. The support provided by the Forestry Project is insufficient compared to the environmental protection requirements.

A World Bank and FAO review of the forestry sector indicates a steady increase in the General Directorate's annual budget (US\$ 4.4 million projected for 2001), amounting to about 0.4 per cent of Albania's public expenditure. More than half the forest budget is spent on personnel costs. Only about 16 per cent are invested in forests and pastures. The review also indicates that forestry expenditures will continue to exceed fiscal income from forest activities.

Forest fires

Forest fires occur mainly in spring and summer, as in the rest of the Mediterranean region. In 1997, the most affected districts were Vlorë, Përmet, Berat, Gramsh, Tirana, Skrapar and Devoll. The burnt forest area amounted to about 2900 ha and burnt pasture to 7000 ha. The General Directorate is responsible for forest fire management. It is reported that other State institutions, as well as district and local authorities, are insufficiently involved in fire prevention and control, or are not involved at all. To improve the situation, the FAO Technical Assistance to the Forestry Project has supported the development of a national forest fire management strategy and action plan.

Hunting

In 1997-1998, hunting decreased considerably as foreign hunters cancelled their visits to Albania following the 1997 crisis. The increase in hunted game species in 1998 points to increased poaching (Table 8.5).

Uncontrolled hunting is a major factor of disturbance for biodiversity, especially during the winter, when migratory winter birds are at risk. Illegal hunting methods are used, even poison. Carnivorous mammals and birds of prey are chiefly affected. The result is a reduction in the population of some species.

Table 8.5: Number of hunted animals, 1997-1998

Name*	1997	1998
Bear	521	536
Beaver	841	1,823
Wild cat	354	202
Lynx	23	25
Otter	442	446
Chamois	441	583
Roe deer	772	521
Badger	1,937	1,608
Wolf	2,656	2,565
Fox	34,262	43,105
Marten	854	892
Wild boar	1,154	954
Hare	..	82,341
Pheasant
Heath cock	..	187
Mountain grouse	..	85,490
Field grouse	..	13,236
Pelican

Source : State of the Environment Report, 1997-1998.

* Species declared as game, according to the Law on Hunting and Wildlife Protection.

Fishing

Fishing did not pose a serious threat to biodiversity in the past. In recent years, however, growing populations in coastal settlements and poverty have resulted in increased fishing along the coast and in Lakes Ohrid, Prespa and Shkodra.

Coastal fishing is carried out mainly by small boats, nets and hooks. The species most endangered by fishing belong to the *Sparidae*, *Soleidae* and *Mullidae* families. The breeding sites of *Posidonia oceanica* are also degraded. Foreign vessels fishing offshore damage the habitats of fish and crustaceans, and cause severe damage to benthic forms off the Ionic coast. This mostly affects the rocky areas of the coast.

Besides traditional techniques, the use of explosives and poisons in lakes is reported. The main fishing species are carp, trout, sturgeon and eel. Much of the fishing is illegal, a particular threat to these lakes' endemic species. Since there is no proper monitoring, it is impossible to assess the damage to fish stocks.

8.3 The framework for biodiversity protection

Institutions

The government body responsible for biodiversity management is the Ministry of Environment. Within the Ministry, the Directorate for Natural Resources Management and Biodiversity formulates biodiversity policy and proposes related legislation. There are four persons in the Directorate (including the Director). Their tasks cover:

- Flora and fauna conservation and implementation of the Convention on Biological Diversity;
- Conservation and management of wetlands;
- Forestry and protected areas; and
- Agriculture and soil protection.

The Regional Environmental Agencies were established in 1994. They are responsible for cooperation in the application of legislation for the protection of the environment, the collection of information related to the environment, imposing fines according to the law, control over the management of protected areas within their jurisdictions, the organization of environmental impact assessments (EIA), and environmental inspection. Generally, one or two persons per county are engaged in nature conservation.

Other institutions are also responsible for environmental protection. In the Ministry of Agriculture and Food, the General Directorate for Forests and Pastures is responsible for the management of protected areas. It consists of the following units:

- Local government forest pastures and extension service;
- Forest police;
- Forests and pastures (forest management and cadastre, silviculture and forest resources, marketing, pastures);
- Protected areas; and
- Finance.

Another four sectors (personnel and foreign relations, services, auditing, legal office) report directly to the Director-General. Three of the

Directorate's specialists are directly engaged in protected areas management. The General Directorate employs altogether 43 permanent experts (including the three for the protected areas).

The Institute of Biological Research (under the Academy of Science) is involved in national (monitoring, conservation measures, climate change, and other) and international biodiversity projects (Ecological Survey of high forests – World Bank; Vegetation Map of Albania – German support; Implications of climate changes on the Albanian coastal ecosystems – UNEP; Study Centre for conservation and preservation of Mediterranean species – EU; Inventory of wetlands – UNEP).

The Museum of Natural Sciences is subordinate to Tirana University (under the Ministry of Education and Science). It has three departments dealing with biodiversity: Botany, Zoology and Geology. Three scientists (PhDs) are employed to deal with monitoring and assessing different groups of fauna and flora, and with national and international projects.

The Forest and Pasture Research Institute carries out research on silviculture and genetic improvement, forest management and inventory, forest protection against diseases and fires, and pasture and medical plants. There are 64 employees in the Institute, including highly educated experts, technical and administrative staff. The Institute is engaged in five scientific research projects, dealing with the rehabilitation of degraded forests, land use and planning, forest road construction, genetic improvement of forest species, and monitoring of pests and diseases. Also, the Institute's specialists are developing a new concept of forest management, EIA expertise, and seminars on forest management within the scope of the Strategy for the Development of the Forestry and Pasture Sector (see the above item on *Forestry*).

Inspection

The Ministry of Environment and its 12 Regional Environmental Agencies are responsible for environmental and biodiversity inspection.

The Directorate of Forest Police is responsible for forest and protected area inspection, and five employees are engaged in this task.

At county level, there are 36 Forest District Directorates, with 1350 employees. Some of them

are responsible for inspection, and the number of inspectors per county depends on the size of the forest management areas.

Since environmental inspection (the Ministry of Environment) also includes biodiversity protection, and the Ministry of Agriculture and Food (Forest Police) is responsible for protected areas, responsibilities between these two overlap and must be clearly redefined.

Both inspections lack equipment and staff, and neither is able to do its work properly.

Legislation

There is no specific law on biodiversity conservation and management. The 2002 Law on Environmental Protection deals with natural resources and requires environmental permits to be issued by the environmental authorities for listed activities that may have an impact on the environment (art. 34). They include a variety of activities such as the building of infrastructure, exploration and exploitation of soil, forests, wildlife and fish. The same law also states (art. 4) that, among the main strategic elements of environmental protection are the conservation of biological diversity specific to the country's natural biogeographical background; the ecological restoration of damaged areas; and the preservation of the ecological balance.

Otherwise, all topics related to biodiversity are fragmentary and mainly incorporated into other sectoral legislation.

Law No. 7223, of 13 October 1992, on Forestry and the Forestry Police Service regulates forest management and protection, defining State, municipal and private forests. It also deals with district forest enterprises, the protection of watersheds (requiring afforestation and the closing of areas to logging and grazing, where necessary), the management of fisheries in mountain water bodies, forest national parks, minor forest produce, the forest police service, and the protection against forest fires. The Ministry of Agriculture and Food is responsible for the application of this Law.

Provisions on protected areas are included in forest legislation. Decision No. 577, of 6 February 1993, under the 1992 Law on Forestry, No. 7223, defines the categories of protected areas, in accordance with the classification of the World Conservation Union (IUCN): scientific reserves, national parks,

natural monuments, natural reserves, and protected forestry areas. The Biodiversity Strategy and Action Plan (1999) includes a new proposal for protected area network that meets the requirements of the Convention on Biological Diversity in terms of the size and management of protected areas. The Ministry of Agriculture and Food is responsible for the application of this instrument.

Recently, the *Law on Protected Areas, No. 8906 of 6 June 2002*, was adopted. The Law regulates the preservation, administration, management and the sustainable use of the protected areas. The classification of the protected areas is based on experience and contemporary legislation, especially the IUCN categories. For the first time in Albanian environmental legislation the concept of "buffer" zones has been introduced. An important article within the Law identifies the Ministry of the Environment as the only governmental body which has the right to make proposals for new protected areas to the Council of Ministers, after consultations with local authorities, the public and other relevant governmental bodies.

Law No. 7917, of 13 April 1995, on Pastures and Grazing, defines 'pastures and meadows' as all land covered by grass or shrubs and that neither belongs to the forest fund nor is agricultural land, and which is used for grazing livestock. They are classified as (1) State-owned pastures, to be managed by the State forestry administration, (2) pastures for general use, given by local authorities to local populations, and (3) private pastures. The Ministry of Agriculture and Food is responsible for the application of this Law.

Law No. 7908, of 5 April 1995, on Fisheries and Fish Farming regulates both marine and freshwater fisheries. The Ministry of Agriculture and Food is responsible for the application of this Law.

Law No. 7875, of 23 November 1994, on Hunting and Wildlife Protection deals with the wildlife management plans that must be based on scientific criteria. The Ministry of Agriculture and Food is responsible for the application of this Law.

Law No. 7662, of 1993 (amended in 1999), on the Plant Protection Service provides for the organization of the Service and for parasite control, pesticides and plant quarantine. The Ministry of Agriculture and Food is responsible for the application of this Law.

International agreements

Albania ratified the Convention concerning the Protection of the World Cultural and Natural Heritage (1972) in 1979. Four nature monuments were established in 1996. These are: Fir of Sotira, Blue Eye, Vlashaj, and Zhej, with a total surface of 4650 ha.

Albania ratified the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 1971) in 1996. The Karavasta Lagoon was the first Ramsar site, although there are at least another five wetland sites in the coastal zone that meet the Ramsar criteria on bird protection. They are included in the draft proposal for a new (extended) protected area network in the National Strategy and Action Plan.

Albania ratified the Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979) in 1998. The conservation of wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the cooperation of several States, obliges Albania to develop cooperation mechanisms in border areas with Yugoslavia and Greece (especially lakes Prespa, Ohrid, and Shkodra and their surroundings).

Albania signed the Convention on Biological Diversity (Rio de Janeiro, 1992) in 1994. Its National Biodiversity Strategy and Action Plan was completed in 1999.

Albania ratified the Convention to Combat Desertification (Paris, 1994) in 1999. It is very important for the conservation of Albania's soils. Degraded forest and pastureland, and the inadequate use of agricultural land, expose these areas to erosion. The implementation of this Convention will also help Albania to solve its soil pollution problems (see Chapter 10).

Albania also ratified the Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979) in 2000. Its implementation is closely connected with the protected area network and its management.

Albania is preparing to accede to the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) (Washington, 1973). It is of particular importance to Albania as it can help establish control over the export of animals and animal products, and so decrease illegal hunting.

Objectives of nature conservation policy and biodiversity strategy

Albania completed its *Biodiversity Strategy and Action Plan* in 1999. It was developed by the former National Environmental Agency, in cooperation with the Institute of Biological Research and the Museum of Natural Sciences, and other national, district and local organizations. It was supported by GEF/World Bank. An Advisory Board supervised the work. The Biodiversity Strategy and Action Plan assesses the biodiversity status, threats, priorities and action plans, including reform and institutional strengthening, legislation, inter-sectoral cooperation, public interest, and international cooperation. Actions are prioritized according to the criteria of the Convention on Biological Diversity, thus providing the basis for achieving national biodiversity policy goals in accordance with international conservation and management standards. The first list of short-term priorities includes the protection of 80 species/taxa (42 vertebrate, 26 invertebrate, and 12 plant species), while the long-term priorities include the protection of 143 species/taxa (95 vertebrate, 31 invertebrate, and 17 plant species). The proposed protected area network would exceed 10 per cent of the territory, as required by the Convention on Biological Diversity.

The 1993 *National Environmental Action Plan (NEAP)* already outlined the threats to biodiversity and the appropriate social remedies. It served as the basis for further conservation and development documents. The report on Immediate Measures for the Implementation of the NEAP (2001) proposes measures for the mitigation of chemical soil pollution and a pilot scheme against deforestation (two projects on the management and afforestation of the Kune and Vaini natural reserves).

A Coastal Area Management Programme has been developed since the early 1990s. Many natural coastal habitats have been destroyed by excessive drainage and land reclamation for agriculture, currently abandoned for practical (unsuitable salt soils) or political reasons (landownership unclear). The Coastal Area Management Programme – biodiversity component (Final Report, 1996) deals with the conservation and protection of sites of ecological and aesthetic value. It integrates the

results and proposals of reports and studies produced in the framework of the Programme and the Mediterranean Environmental Technical Assistance Programme. The report includes: (i) a section on the legal and institutional framework; (ii) a definition of the coastal zone management units; (iii) a definition and description of the sites of interest; (iv) a diagnosis of the main environmental issues and threats affecting these sites; (v) a selection of the national priorities for conservation; and (vi) recommendations for action. The Coastal Area Management Programme has not yet been approved by the Council of Ministers (see Chapter 11).

Protected areas

The development of the protected area network started in 1940. The first protected areas were the Kune-Vain-Tale Hunting Reserve and the "Tomorri Mountain" National Park. In the 1960-1966 period, there were 6 national parks, and the hunting reserves comprised 15 forest and lagoon areas by 1970. In 1994, the protected area network was harmonized with the IUCN classification and enlarged. In 1999, Prespa National Lake and Lake Ohrid were designated as protected landscapes, bringing the areas under protection up to 5.8 per cent of the national territory. The categories and number of protected areas and their conservation objectives are shown in Table 8.6.

Protected areas are managed by the General Directorate of Forests and Pastures of the Ministry of Agriculture and Food. Only two or three protected areas have management plans that, according to the reported status, do not meet the requirements of the Convention on Biological Diversity. It is reported that the categories of the existing protected areas should be revised so as to introduce areas of the ecosystems that are underrepresented (or not represented at all), and to merge some existing ones to improve conservation management.

Expanding and strengthening the protected area network in accordance with the European Ecological Network (ECONET) is one of the main goals of the National Biodiversity Strategy and Action Plan (Annex B-1: Proposed Representative Network of Protected Areas – RNPA – for Albania).

Table 8.6: The protected area system

Category	Protected area			IUCN category	Main goals
	Number	in ha	% of area protected		
Total	386	164,110	100		or 5.8% of Albania's territory
Strictly protected area	4	14,500	13	I	Scientific research, fauna protection
National park	12	25,890	24	II	Ecosystem protection, recreation/tourism
Monuments of nature	300	4,360	4	III	Protection of specific features
Managed areas	26	42,960	39	IV	Protection through management activities
Protected landscape	5	59,200	2	V	Landscape protection, recreation/tourism
Protected resource	4	18,245	17	VI	Sustainable use

Source : State of the Environment Report 1997-1998; and REC. Final Country Report, Strategic Environmental Analysis, Albania, 2001.

Monitoring and databases

CORINE Biotope Mapping was completed only for protected areas (less than 4 per cent of the territory). There is no system for biodiversity inventorying and monitoring. Some species are periodically observed according to the requirements of international conventions (Convention on Biological Diversity and Ramsar Convention). Biodiversity research and monitoring are priorities in the Biodiversity Strategy and Action Plan as immediate actions, as they are very insufficient. Short-term actions necessary for its implementation are training staff in the responsible institutions, establishing permanent sampling plots and CORINE Biotope Mapping.

Since the Action Plan does not include budgets, it is not possible to assess the necessary financing for the biodiversity inventory and monitoring.

8.4 Conclusions and Recommendations

Since 1998, Albania has done much to improve its nature conservation policy. First, the Committee for Environmental Protection (under the Ministry of Health and Environment) was transformed into the National Environmental Agency, which started establishing many important programmes and strategies. In the past three years it was recognized that the Agency was not strong enough to carry out its obligations fully. Therefore, the Ministry of Environment was established in 2001, as the government body responsible for nature conservation policy. At the same time, the Ministry of Agriculture and Food (more precisely the General Directorate for Forests and Pastures) retained responsibility for protected areas.

The division of responsibilities between the Ministry of Agriculture and Food and the Ministry of Environment for the management of the protected area network prevents any effective implementation of the national nature conservation policy, as defined in the Biodiversity Strategy and Action Plan. The Ministry of Environment should bear full responsibility for it with the assistance of the Ministry of Agriculture and Food and other government bodies, scientific institutions, and NGOs.

The Ministry of Environment has the mandate to implement the national nature conservation and biodiversity management policy. However, the Ministry is institutionally still too weak and does not have the adequate capacities to fulfil the requirements defined by the nature conservation legislation and related policies and strategic documents. At the same time, the Protected Area Directorate of the Ministry of Agriculture and Food, within the General Directorate for Forests and Pastures, has managed the protected areas since they were established, and is the only institution that has the required experience, personnel, organization and methodology.

Recently, the Law on Protected Areas was adopted. This law regulates the preservation, administration, management and the sustainable use of the protected areas. The law also identifies the Ministry of the Environment as the only governmental body which has the right to make proposals for new protected areas.

The designation and management of protected areas should take into consideration the interests of local authorities, the private sector and other

stakeholders. This can be achieved by including them at an early stage into the planning and decision-making processes of protected area management, and enabling them to share the benefits and better accept the related constraints (on their activities, for instance). This process adds value by mitigating poverty and raising public awareness of biodiversity values.

Recommendation 8.1:

The Ministry of Environment should support the responsible authorities to establish management plans for protected areas under the new Law on Protected Areas, for example by financing studies and developing methodologies and procedures.

According to the Convention on Biological Diversity, each country should develop national strategies, plans or programmes for the conservation and sustainable use of biodiversity or adapt existing ones to reflect the measures set out in the Convention. It should integrate, as far as possible and appropriate, the conservation and sustainable use of biodiversity into relevant sectoral or cross-sectoral plans, programmes and policies. The country should also identify and monitor the biodiversity components that are important for its conservation and sustainable use, as well as the processes and activities that have or are likely to have significant adverse impacts on the conservation and sustainable use of biodiversity. In order to achieve this, the country should establish a system of protected areas, and regulate or manage biological resources important for biodiversity conservation whether within or outside protected areas.

Species are protected by two main tools: (a) specific measures on species management (e.g. bans on activities that damage or disturb them), and (b) conservation of their habitats. Therefore, the protection of particular flora and fauna species is an integral part of the ecosystem protection that is carried out, inter alia, by establishing a protected area network. Measures for the protection of particular species should be incorporated into the management plans of protected areas. All European countries have one law to regulate both species protection and protected areas (there do not seem to be any exceptions).

The Government has recently adopted a new Law on protected Areas. However, there remain other laws and draft laws relevant to nature protection. The preparation of a single consistent and coherent legal act on biodiversity conservation would help to

clarify the respective competencies of the Ministry of Environment and the Ministry of Agriculture and Food.

Recommendation 8.2:

To achieve the goals of the Biodiversity Strategy and Action Plan and fulfil the obligations under the Convention on Biological Diversity, the Ministry of Environment should develop a legal act on biodiversity conservation.

Minor forest produce has been an important source of income to local Albanian populations in recent years. Medicinal and aromatic plants have been collected and exported to foreign markets. Studies done by international organizations and national scientific institutions indicate the economic importance of medicinal and aromatic plants to the country, and also emphasize the increasing threats to biodiversity. To prevent damage to species and ecosystem degradation, people who collect and cultivate medicinal plants should be educated and trained. The collection of those wild plants should gradually be replaced by their cultivation, while both should be regulated by adequate institutional and legal arrangements.

Recommendation 8.3:

The Ministry of Environment and the Ministry of Agriculture and Food should develop, as soon as possible, a proper institutional and legal framework for the medicinal and aromatic plant market to promote the cultivation of such plants. Their collection should be based on biodiversity conservation criteria and methods, and on a licensing system.

Forest degradation and forest loss have resulted, among other things, in increased soil erosion and changed water regimes. Poor soil quality, reduced aesthetic landscape values and biodiversity loss affect all sectors and the Albanian environment as a whole. Although reforestation is currently supported by international projects, a permanent national reforestation scheme, based on ensured financial contributions, should be established. The experience of some other countries in transition could be taken into account, such as that of the reforestation fund in Croatia. According to the Croatian Forest Code, each State or private company is obliged to pay 0.07 per cent of its total annual income to the reforestation fund, which is managed by the State Forest Enterprise. Recently, the control of the fund was discussed to make its management more transparent. Money from the fund should be available and accessible to any

company or NGO proposing adequate reforestation programmes for priority areas. The fund should be administered by the General Directorate for Forests and Pastures. All stakeholders, including the local community, should keep an eye on its transparency.

Recommendation 8.4:

The Ministry of Agriculture and Food should establish a permanent national reforestation scheme and undertake actions to protect forests from legal cutting and fires, based on secured financial contributions.

At the moment the Karavasta Lagoon is the only Ramsar site of Albania. There are however at least five wetland sites in the coastal zone that meet RAMSAR criteria.

Recommendation 8.5:

The Ministry of Environment should take steps to include those sites that fulfil criteria of wetlands of international importance, to be included as RAMSAR sites and in the national network of protected areas.