

THE REGIONAL ENVIRONMENTAL CENTER

for Central and Eastern Europe-

Annex 1

COUNTRY REPORT

ALBANIA

WITHIN

STRATEGIC ENVIRONMENTAL ANALYSIS OF ALBANIA, BOSNIA & HERZEGOVINA, KOSOVO AND MACEDONIA

produced by REC country office in Albania

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Country report - Albania

Methodology

The country report for Albania was compiled by the REC Country Office in Tirana, employing a wide base of expertise. A team comprised of four specialists from different fields and representing various institutions has been established:

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The team was lead by the Country Office Director, Mr. Mihallaq Qirjo. There were several discussion meetings to coordinate a uniform methodology for preparing the various sections and conclusions. Each expert was responsible for covering certain fields of the Assessment, including library research and personal contacts for data collection on environmental status, indicators and conclusions. The overall review of the material was performed by Mr. Haxhimihali.

Introduction

Environmental problems in Albania, as in other countries, are the consequence of demographics and economic development. After the Second World War, for over four decades the exploitation of natural resources and raw materials was carried out without considering the limits of possible utilization, and without regard to industrial effluents treatment and urban waste disposal.

The change of political systems in 1991 has not improved the environmental situation. In some aspects it has been further aggravated, if not chaotic. New environmental issues have arisen, only to add to inherited problems that remain to be solved. At present, the most affected environmental components are the soil, inland waters, forests, and coast. The urban environment is a new major concern.

1. Environmental Status

1.1 Land

The territory of Albania is 28 748 km², of which 36% are forests, 15% pastures, 24% agricultural land and 4% lakes.

Erosion is a widespread phenomenon resulting from a range of factors, including geology, relief, (excessive slope of soils, high mean altitude above sea level -- more than twice the European average), vegetation and agricultural practices. In many instances these factors have greatly influenced soil erosion up to extreme levels, above 150 tons/ha/year. About 20% of Albanian territory is exposed to strong erosion by more than 30 tons/ha/year; while in 70% of territory the level of erosion is medium, about 30 tons/ha/year.

Hillside areas such as Kerraba (near Tirana), Mallakastra (near Fier), Sulova and Dumrea (near Elbasan), and the upper parts of Shkumbini valley are critical areas with regard to environmental degradation.

Soil erosion is associated with poorly maintained terraces, overgrazing of livestock, and deforestation due to illegal felling for utilization as wood fuel and timber. It is an important aspect of environmental degradation.

Rather problematic is the situation regarding industrial pollution from the past. Relatively great stretches of terrain within or near the former chemical plants or enterprises in Durres and Vlore are contaminated as the result of activities conducted there for decades with disregard for environmental protection criteria. These areas are primarily close to coastal zones. In the confines of the former chemical plant in Durres City, contamination by 6-valent chromium compounds is observed in an area of nearly 10 ha. In Durres there is also a stock of about 1000 tons of expired pesticides. Nearly 45% of the overall amount of pesticides present in the country is classified as hazardous chemicals. Within the confines of the former soda plant in Vlore an appreciable amount of mercury is present in the soil, while around the nitrogen fertilizer plant in Fier City the soil is polluted with arsenic compounds.

There are about 1,620 tons of chemicals stored at 12 enterprises, and among them 60.2 tons are of

a hazardous nature, i.e. cyanides, mercury salts, etc. About 800 m³ of sodium arsenate solution are stored in the Nitrogen Fertilizer Plant in Fier, under poor conditions.

After the political change, the number of imported cars, mainly old and used, increased significantly. This has created a huge number of car wreckages and their residues scattered throughout the country, thus defiling the landscape and posing health and environmental risks.

1.2 Water

Albania is one of the richest countries of Europe in water resources, although its consumption is very small. The national aquatic network comprises rivers, underground waters, lakes, lagoons, and seas. The rivers of Albania are characterized by high average annual water flow, the total flow

being about 1,308 m³/sec. The carrying of solid matter within the river water is extremely high, the average annual value being 1,650 kg/sec.

Contamination of surface and underground waters is widespread. In a great majority of rivers there is a notable deficit of dissolved oxygen. Generally, in these cases high values of chemical oxygen demand (COD) and of biological oxygen demand (BOD) are also observed.

Concerning the safe quality of water, there is a monitoring network managed by the Ministry of Health (the Institute of Public Health and the Directorates for Primary Health Service in districts). They monitor about 15 indicators and the data show that underground water used for drinking has good microbiological and chemical characteristics. The pesticides are not monitored systematically, while the hydrocarbons are not subject to monitoring.

During 1997 and 1998, respectively 3,340 and 12,450 tons of liquid wastes were discharged into rivers, water reservoirs, and lakes. The greatest part of these wastes result from industry: cement, leather, ceramics, mechanical, textile, wood processing etc. The oil and gas processing industry accounts for about 22% of the overall liquid waste. The river of Gjanica, in which the waters of oil extraction and processing are discharged, is among the most polluted in the country: phenol content is 2,62 - 3,64 mg/L, COD 131 - 157 mg/L and BOD 42 mg/L, all of them representing levels far above the established standards. A considerable amount of solid and liquid waste is discharged by ore dressing factories into the rivers Great Fan, Little Fan, Mat etc.

1.3 Air

There is little data regarding the emission of greenhouse gases into the atmosphere. According to the data supplied by the Ministry of the Public Economy and Privatization, enterprises within its

system have emitted into the atmosphere 233, 189.3 and 225.2 thousand tons of CO_2 , respectively in the years 1996, 1997 and 1998. An estimate has been made based on the average amount of freons used in different refrigerating systems concerning the amounts of the gases responsible for stratospheric ozone depletion. It revealed that in years 1997 and 1998 are imported from various countries, mainly Western Europe (Italy), respectively 9,767 and 12,803 kg of freon R12, and 9,900 and 23,722 kg of freon R22. A reliable national inventory on greenhouse gases (CO₂, NO_x and CH₄) will be prepared only by the end of year 2000.

The monitoring of air quality in certain cities has just started by the Institute of Public Health and the Institute of Hydrometeorology, measuring the main indicators, i.e. the concentration of SO₂, NO_x, troposphere ozone, and particulate matter less than ten microns in diameter (PM₁₀). Measurements show that the content of PM₁₀, which is particularly harmful to human health, in some areas is higher than accepted values, while the other pollutants do not exceed the accepted norms. It is to be noted that measurements are quite limited in scope and the methods of measurement are not standard, so all data may be regarded as approximate.

The energy production sector is a polluting one. Thermo-power stations in operation have discharged 1,650 tons of ashes into the air, 500,000 tons of wastewater, 7,100 tons of SO_{2} , 14,2000 tons of CO_{2} and 1,320 tons of dust during 1997-98.

In some areas of the country (Elbasan and Fushë-Krujë cities), cement producing plants cause extreme air pollution, as they discharge great amounts of particulate matter into the atmosphere, amounting to up to 10% of their overall production.

The last decade was characterized by a rapid increase in the number of vehicles, thus increasing significantly the share of air pollution caused by transportation, particularly in large urban areas. The carbon monoxide content in urban air is expected to increase in the future, as the number of cars continues to increase rapidly. The same is true for the acid gases (SO₂ and NO_x).

The uncontrolled import of car fuels, particularly of lubricating oils, not in compliance with existing standards is a source of toxic pollution of the air with lead compounds and other hazardous products resulting from the burning of lubricating oil.

1.4 Biodiversity

Albania is well known for its high diversity of ecosystems and habitats. Within its territory there are maritime ecosystems, coastal zones, lakes, rivers, evergreen and broadleaf bushes, broadleaf forests, pine forests, alpine and sub-alpine pastures and meadows, and high mountain ecosystems.

Based upon existing knowledge, Albania has a rich diversity of flora and fauna with about 3,200 flora species and 756 fauna species, respectively. Approximately 30% of European flora occurs in Albania, and the high forests of Albania are the habitat for large game such as the brown bear, wild boar, and others, and also of fowl species, which flourish in virgin forests.

There are 27 plant species with 150 subspecies which are endemic in Albania, and another 160 plant species, which are sub endemic in Albania, Yugoslavia, and Greece. Lake Ohrid is the most well known ecosystem in the country in terms of fauna endemism: over 40 species of molluscs and two fish species are endemic.

The Albanian inland and marine ecosystems are a part of the Mediterranean and Balkan natural ecosystems. Transboundary lakes such as Shkodra, Ohrid (see country report Macedonia), and Prespa are points of flora and fauna exchange with other Balkan countries.

Fifteen Important Bird Areas have been identified in Albania with a total area of 903 km². Seven of these sites are important for significant numbers of globally threatened species (*Phalacrocorax pygmeus, Pelecanus crispus, Oxyura leucocephala, Aquila clanga, Numenius tenuirostris*), and

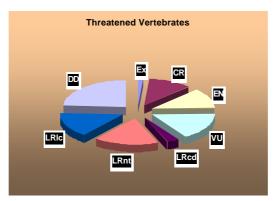
eight sites are key for internationally important numbers of wintering birds. 135 species of concern to European conservation breed in Albania. Crossborder sites with Greece and FYROM are also of exceptional conservation interest.

The coastal wetlands and lakes inside the country are particularly important sites for the wintering of migratory species; about 70 waterfowl species with a population of 180,000 are wintering in these areas. At least four of them (Karavasta, Narta, Shkodra and Ohrid) may be considered sites of international importance for waterfowls known as Important Bird Areas, with more than 20,000 waterfowl species at each site. Nevertheless, presently only Karavasta has the Ramsar status¹.

Despite its richness in biological and landscape diversity, Albania is considered to have the highest rate of biodiversity loss in Europe². At least two species of plants and four species of mammals are totally extinct, while 17 species of birds no longer nest in Albania.

There are a number of globally threatened species in Albania, since at least 72 vertebrate and 18 invertebrate species of global importance have at least a portion of their habitats and population in Albania. For some of them (*Pelecanus crispus, Phalacrocorax pygmeus, Salmo letnica* and *Acipenser sturio*), Albania is of critical importance.

The main endangered types of ecosystems and habitats include marine ones (medium and infralittoral level), coastal ecosystems (sand dunes, delta rivers, alluvial and wet forests, lagoons and coastal lakes), and terrestrial ones, such as alpine pastures and meadows, continental and glacial lakes, and oak and conifer forests.



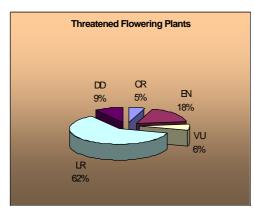


Figure 2. Threatened vertebrates and threatened flowering plants in Albania

¹ UNDP-GEF, Small Grants Programme Country Strategy, ALBANIA, Tirana, April, 1999

² According to Europe's Environment, 1994; also cited in UNDP-GEF, SGP Country Strategy, ALBANIA, Tirana, April, 1999

(Legend: DD - data deficient; Ex - extinct; CR - critically endangered; EN - endangered; VU - vulnerable; LR - low risk; LRlc - low risk, less concerned; LRnt - low risk, near threatened; LRcd - low risk, conservant detentioned)

Presently, the number of animal species included in the Albanian Red Book is around 573, of which vertebrates comprise 273 species or 36% of the vertebrates of the country. The red list of plant species numbers some 320 species of flowering plants, 45 species of mushrooms and 25 species of marine plants. The situations are represented in Figure 2.

Urban environment

Degradation of the urban environment, as well as urban pollution is an acute recent environmental problem. This situation is apparent not only in large urban centres and beaches, but also in the rural areas. The mismanagement of urban solid wastes has created serious problems nationwide. The actual collection, transport and disposal of urban solid waste are accomplished by simple means. As a rule, the waste is dumped directly into selected areas without any implementation of an environment protection system, and without application of severe criteria regarding selection of the disposal site.

The situation regarding sewage water is very critical. So far, sewage treatment is totally absent throughout Albania, and some of the new buildings, particularly in suburban areas, are even not linked to the sewage water network.

The great demographic increase of urban zones following the political change resulted in the enlargement of urbanized areas and the deterioration of the environment, by destroying green areas in particular. Damage to green spaces continues due to the construction of innumerable kiosks and other buildings with complete disregard for urban planning criteria. These heavy environmental damages, in many instances, are irreversible.

Green areas in cities such as Tirana suffer because of illegal constructions, but the most damaged sites are the central park and the banks of the Lana River.

It is estimated that in the major cities the green area during the last few years has decreased by $2m^2/capita$, a straightforward result of the damage caused to the environment by uncontrolled migration. At the national level, the green area is 4 - 17 m²/inhabitants with an average of about 5 - 6 m²/inhabitant for the urban areas of the first and second level. In the capital city Tirana, the green surface area has been reduced from 12,5 m²/inhabitant to 5 m²/inhabitant.

2. Driving Forces

2.1. Poverty

There is no official data regarding the poverty line in the Republic of Albania. Nor is the index of nominal incomes officially reported. The only information of this kind is available from the Syndicates. According to data collected through the surveys they have conducted, the poverty line for an Albanian family of four is 36,232 Lek³ per month, or USD 240 (1998). Typically, 81.5% of this sum is used for food. In rural areas, average income per family amounts to 5.172 Lek or USD 34 monthly (1998). Consequently, 77 % of the Albanian population lives below the calculated poverty line.

Taking into account off-the-book and moonlighting employment as well, which involves 10 - 15% of families, 62 - 67% of the population is estimated as living below the poverty line. In certain rural areas the percentage of the population living below it is even higher.

The linkage of poverty with the environment may be identified as:

- Environmental degradation through deforestation, illegal hunting, biodiversity degradation, impoverishment of marine and fresh water fauna, etc.
- The splitting of arable land into small private parcels, which prevents the process of establishing protective measures.
- Decrease of interest in environmental protection and development.
- The abandonment of rural habitation and internal migration, resulting in increased environmental stresses on suburban and rural-urban sites.
- Low environmental awareness among those who are primarily and necessarily concerned with making their living.

Year	1990	1993	1995	<i>1998</i>
Price index for consumable goods, (%)	100	185,8	109	114,1
Purchasing power, (%)	100	53,8	91,8	87,4
Average monthly salary, (in Leks)	570	3684	6406	11509
Population receiving social support, %	N/A	15,7	14,4	16,5
Unemployment rate, (000/ persons)	150	301	171	235
Infantile mortality, (per 000/born alive)	28,3	30,7	24,04	15,1

Table 1. Some poverty indicators

2.2 Economy

One of the priorities identified under the NEAP (National Environmental Action Plan) is the establishment of a comprehensive link between sectoral policies and the environment. For this purpose, different measures were defined in order to develop environmental sectoral policies related

³ See the exchange rates in the Annex 5

to the restructuring of the economy, privatization of the public economy, establishment of an environmental taxation system, and development of the agriculture, transport and energy sectors.

In addition, the framework law "On Environmental Protection" No. 7664 (1993) has provided a legally binding requirement for all projects affecting the environment (including programs, plans and sectorial policies) to undergo the Environmental Impact Assessment process. This Law and the new Constitution of Albania (1998) laid down for the first time the principle of sustainable development requiring the rational use of forests, waters, pastures and other natural resources.

In this context, different sectoral development strategies have been formulated and adopted. However, some of them, such as those on agriculture, energy, privatization, forestry, as well as other important national policy documents, were prepared and approved without any prior environmental analyses according to the guidelines of the NEA. The integration of environmental protection with the formulation and approval of sectoral policies, plans and programs still remains a serious challenge for all decision and policy makers in Albania.

2.2.1 Agriculture and livestock

The substantial fragmentation of agricultural economies and the lack of long-term strategies are the main factors that have prevented the elaboration of sectorial policies and their integration with environmental issues. The situation is more problematic in hilly and mountainous areas where development policies have never been outlined. Moreover, in the mountainous areas and even in the lowlands, ownership conflicts trigger the abandonment of farming and weaken the awareness of environmental issues.

Year	1990	1993	1995	1996
Livestock/100 ha of				
arable land				
1. Cattle	90	93	120	101
2. Goats & Sheep	395	456	588	418
3. Equines	26	28	33	32
4. Pigs	31	13	14	12
Fertilizer consumption,				
(kg /ha)	483	N/A	130	177
Irrigated land				
Irrigated land, (thousands ha)	423	341	N/A	324
(unousanus na)	423	541	IV/A	524

 Table 2. Some agricultural indicators

Fertilizer consumption in agriculture during the last decade has declined, being below the optimal dose. Therefore, a diminution of soil pollution by chemicals has been observed, and it may be stated that the actual use of fertilizers does not present any environmental pollution problem. Fertilizer requirements are estimated at 380 thousand tons/year (of which nitrogenous 150 thousand tons, phosphate 210 thousand tons, and potassium 20 thousand tons), while the amount used during the 1998 year is 125 thousand tons (or 1.8 quintal/ha), of which 25,900 tons urea, 48,700 tons ammonium nitrate, 50,000 tons phosphate fertilizers, and 400 tons potassium fertilizers. {Therefore, one must take into consideration that any future increase of fertilizer consumption to fully meet the agricultural demand would lead to an increase of soil and underground water pollution, if no adequate protecting measures are to be implemented.}

Pesticide use has also declined, and in 1998 a relatively small amount was used. The low level of use is directly related to the poverty of the farmers who cannot afford to purchase pesticides, and also to the change of the land structure. In the years 1997 - 1998 the amount of imported pesticides declined by about 20% (76 and 89 tons respectively). It is worth mentioning that none of the used pesticides are classified as POP (persistent organic pollutants).

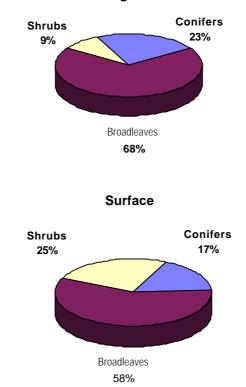
Land use/coverage inside the Protected Areas	Hectares, ha	Percentage, %
Forests	98493	60.02
Pastures and meadows	15525	9.46
Arable land –Agricultural land	8064	4.91
Wetlands	24700	15.05
Non-productive land	14579	8.88
Land occupied by buildings and houses	2750	1.68
Total	164111	100.00

Table 3. Composition of the existing Protected Areas system based upon the land use. Year 2000

Source: The General Directorate of Forest and Pastures.

2.2.2 Forestry

Albania is rich in forest and pasture resources. The forests cover 1,030,000 ha or 36% of the country's territory, and the pastures about 400,000 ha or 15%. Approximately 60% (244,000 ha) of the pastures are alpine and sub-alpine pastures and meadows.



Standing Volume

Figure 1. Standing volume and the surface consistency of the Albanian forests.

During the last half century the forested area has declined from 45% to 36% currently. The initial process of deforestation for the purpose of building terraces was followed later by their total abandonment. This has contributed to serious soil erosion and degradation, endemic in all regions of the country.

Protected Areas

Until the beginning of the 1990s, the total amount of Protected Areas was not more than 2% of the country's territory. In 1994, as part of the Ecological Monitoring of the High Forests in Albania,

and based on the Protected Areas categorization system of IUCN, a number of new Protected Areas were identified and proposed which would have effectively doubled the existing number. Following the recent designation in 1999 of the Prespa National Park and lake Ohrid as Landscape Protected Areas, the areas under protection reached 5.8% of the national territory. The forests inside PA make up 9.6% of the country's forests, while 1.15% of the country's arable land is protected.

Status of Forestry Resources in Albania

During the past few decades there have been noticeable effects on forest productivity, since many existing forests are heavily degraded and thin, and cannot fulfil their ecological functions. The lack of investments for silvicultural works, new forestation or reforestation, the maintenance of forest roads, fire protection, and other measures has contributed to the loss and degradation of forest habitats.

Forests close to rural dwelling areas are particularly exhausted. They include oak and other tree plantations, which are characterised by high biological diversity in comparison to the other types of forests. Because of

the difficult economic situation and the traditional nature of rural Albanian society, this population is surviving by overexploiting forest resources.

There is severe tree cutting for cooking and heating fuel, and overgrazing, particularly by goats. The harvesting of shrubs and in coastal forests has created problems especially for birds, which use these habitats for nesting. Illegal tree felling is rampant in many parts of Albania, particularly in the poorer northern and northeastern districts of the country.

The year 1997 has been the most critical one: 5,494 contravention acts and fines of illegal cuttings were registered, of an estimated damage of 232 million leks. Penal contravention acts are estimated at 776 cases with a total damage of 131 million leks, while administrative contravention acts constitute 4,718 cases with a total damage of 100 million leks. The rate of fine collection is very low, only 10-20% of them having been secured. Most of the illegal cuttings are executed for timber production.

Fires are causing increasing damages in the forest in recent years. During 1997 alone, some 840 cases of forest fires were registered, damaging approximately 7200 ha and burning out roughly 2500 ha of forests. In most of the cases, fires are set intentionally by villagers and shepherds. This phenomenon is more frequent in the districts of Southern Albania.

Damage caused by diseases are considerable due to the lack of investment and treatment. During 1997-1998 diseases damaged some 50,000 hectares of forests. Black pine, oak, beach and chestnut are most sucsecptible to this phenomenon.

Source: NEA, Report on the Status of Environment, 1997-1998.

Although progress has been achieved in the field of protected areas, there are still problems and issues which need to be addressed, such as:

- The lack of an adequate legal and institutional framework;
- The existing network of Protected Areas is very limited, not always representative of the highest nature and biodiversity values, and poorly managed;
- The lack of existing Protected Areas Management Plans (Management Plans have been prepared for only two or three of the existing Protected Areas);
- Lack of financial resources for effective administration of the protected areas;
- Shortage of staff and lack of training.

Red list Species

The number of rare and threatened species of plants and animals is high and is expected to increase. Loss of biodiversity is due to the pressures brought on nature by human activities, namely uncontrolled and illegal tree cutting, overfishing in shallow zones, uncontrolled hunting and fishing even for rare and protected species, like *Pellecanus crispus* and *Acipenser sturio*, as well as to the lack of resources for sound environmental management of coastal resources, national parks, and protected areas.

2.2.3 Energy

Albania is a large-scale energy producing country per capita. The primary structure change for energy as given in Table 4, shows very clearly that hydropower energy production has been the main energy source for some time. The increase in the share of hydropower during the last decade resulted from the closing down of the majority of thermo-power stations due to lack of coal supplies. The final consumption of energy has changed from year to year, and energy network losses are significant. The share of energy use for the everyday life of the population is increasing continuously. The majority of buildings are individually heated by electricity.

The energy production sector is a polluting one. Thermo-power plants in operation have discharged 1,650 tons ashes into the air, 500,000 tons wastewater, 7,100 tons SO₂, 14,2000 tons CO₂ and 1,320 tons of dust during 1997-98.

						1000
ENERGY	1993	1994	1995	1996	1997	1998
PRODUCTION,						
Million kWh						
HPEC	3311.1	3903.7	4305.6	5571.4	5025.6	4971.7
TEC	170.4	3771.5	171.2	206.3	157.5	82.7
Other		132.2	0.0	1.1	0.7	13.0
Import			138.9	484.7	711.3	1069.9
ENERGY USE						
Export			213	1407	839.2	690.4
Network losses			2347.3	2547.6	2913.1	3180.3
Industry			505.5	540.8	364.6	
Agriculture			39.1	46.2	26.2	
Population			822.5	1093.5	1104.2	1239.2
Other			629.4	628	647.2	988.2

Table 4. Structure of the Energy Production in Albania

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

2.2.4 Transport

The use of motor transport is undergoing a tremendous increase during the transition period, thus becoming a heavy air polluter. The total number of vehicles per capita is increasing annually and the impact on the air quality is likewise multiplying. The number of secondhand trucks is quite high. Table 5 shows the change in vehicle numbers, according to type in different years.

There is no national inventory available thus far regarding gaseous emissions from the transport sector. The main problem is more likely the lack of good fuel combustion by very old motorcars, rather than the fuel quality. According to a survey, the quality of domestic and imported fuels fully meets EU standards for elementary content of sulphur.

Table 5. Change in vehicle numbers						
Vehicle type	1994	1995	1996	1997	1998	
Cars	67,960	58,682	67,278	76,822	90,766	
Buses and minibuses	2,806	6,651	7,612	8,747	9,227	
Trucks	42,271	25,790	27,774	30,105	34,378	
Road tractors	8,842	3,334	2,848	3,151	2,731	

Table 5. Change in vehicle numbers

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

The Albanian taxation system does not take into account any environmental protection considerations regarding the import of used cars. According to the actual taxation system in force,

the customs tax levels are lower for used cars than for new, or those equipped with catalytic converters.

2.2.5 Industry

Prior to the new political and economic changes, the industrial sector was one of the pillars of the Albanian economy. Industry generated 58% of the country's GDP, and its major branches were heavy, light and food industries. Albania had an important chemical industry, producing nitrogen and phosphate fertilizers, pesticides, soda ash and caustic soda, as well as pigments, paints and solvents. Oil refining, copper smelting, iron metallurgical complexes, cement production and the wood and paper industry accounted for a substantial part of the industrial production.

After the change there was a sharp decrease in industrial production, contributing 12.4% and 12% to GDP in 1997 and 1998 respectively. Nowadays, due to industrial stagnation, more than 50% of GDP is attributed to agriculture.

Oil refining, tanneries, production of cement and other construction materials, and food processing are the typical branches of industry in Albania. Table 6 shows some general data on the production scale of the biggest oil refinery in Albania, with a processing capacity of about 1.2 million tons/year.

At present, pollution from the industrial production sector is not so apparent because of the sharp drop in production rates. Even so, pollution caused by operational enterprises remains as high as before and in some areas of the country considerable environmental impact from industry is still present. The majority of existing industries in Albania apply very old technologies that provide no effluent treatment whatsoever. Moreover, institutions in charge of the environment have not undertaken research work aimed at discovering adequate solutions for improving production processes and introducing advanced technologies for reducing wastes.

In cases where the environmental license procedures are enforced (for new applications and for state-owned industries under the privatization process), such a license is delivered on condition that the operators of pollution sources apply end-of-pipe or cleaner production technologies, monitor its gaseous, liquid and solid discharges and report them to the Regional Environmental Agencies. Albania has not yet established a sound environmental database on a national and regional scale concerning effluents. Due to institutional and professional weaknesses, the environmental inspectorate bodies cannot command or promote efficient compliance with legal requirements regarding emissions standards, or the recording and provision of information. It must be concluded that Albania is not yet able to prepare annual national inventories on gaseous releases or, on the other hand, to provide relevant scientific and reliable data on them. However, some efforts have been made in applying CorinAir methodologies to the inventory of gaseous effluents, and the International Project Preparation Committee approaches to the inventory of greenhouse gases.

Oil products	Nafta	Kerosene	Gas oil	Oils	Solar	Mazout	Bitumen	Coke
1993	N/A.	28,621	147,631	2,860	84,389	105,249	19,516	94,170
1994	N/A.	28,641	111,393	626	74,777	81,504	34,001	74,408
1995	N/A.	28,987	76,710	144	76,710	122,859	32,850	63,472
1996	36,658	25,385	94,616	50	79,599	114,458	19,597	63,472
1997	15,405	10,959	57,035	35	48,867	90,961	16,900	33,678
1998	21,316	1,870	90,670	42	65,102	62,006	15,782	57,842

	11	2
Table 6	Energy products in Albania	(tons)

Industrial waste disposal practices in Albania are a long way from fulfilling environmental protection requirements. In general, industrial solid waste disposal is not considered an important part in the chain of industrial processes. Waste is simply dumped in sites not far from the industrial enterprises producing them, and no measures are taken regarding their final disposal. In addition,

no monitoring of the impact of these wastes on the environment is carried out. In the years 1995-96 some 1.1 million tons of solid industrial waste was generated, mainly from chromium and copper ore dressing plants in the northern part of the country (Bulqize, Kraste-Bater, Fushe-Arrez, Reps, Kurbnesh), but also in the south-east (Rehova, near Korça). During the crisis of 1997, the amount of solid discharge into the environment was lowered by 50% with respect to the previous year, as the rate of production itself fell considerably. In the following year, industrial production was reactivated in some sectors, and the amount of solid waste discharged into the environment increased again to pre-1997 levels.

Waste prevention at the source, recycling, and recovery policies are not yet practised in Albania. A matter of concern has been the inventory of hazardous chemicals stockpiled after the closure of the main heavy and chemical industry plants. There are about 1,620 tons of chemicals stored in 12 enterprises and among them 60.2 tons are of a hazardous nature, such as cyanides, mercury salts etc. About 800 m³ of sodium arsenate solution are stored in the Nitrogen Fertilizer Plant in Fier, under poor conditions.

Rather problematic is the situation regarding stocks of expired pesticides, amounting to about 1,000 tons. About half of this quantity is no longer usable. This situation presents a serious environmental and health risk to the population that has moved near the contaminated area, like in Durres nearby the territory of former chemical plant.

2.2.6 Consumption

Following the changes of 1991, with the transition of the country to a market economy, the predominant mentality became that of a consumer society. This resulted in a change of use patterns (use of more goods packed in cardboard, glass and plastic) and in greater generation of urban waste. The rate of waste generation has increased steadily and in 1998 reached 0.7 kg/person/day, although this is still below the average for other European countries (1-1.15 kg/person/ day). The rate of waste generation tends still to increase, being higher than the rate of population increase, thus aggravating the present difficult situation concerning the urban waste management in relation to pollution of land and underground waters.

Urban waste recycling and re-use is not practised. {For the present time disposal of solid urban waste is being made without due respect to the protection of the environment. This situation has created serious problems in the management of urban solid wastes nationwide.}

2.2.7 Natural resources

The development of the extraction industry has been a major priority in Albania for several decades. Oil, natural gas, coal, iron nickel ores, copper and chromium ore resources have been intensely exploited in a non-sustainable way. In the 1990s, the situation changed rapidly thanks to the closure of the biggest mines. The general tendency (see Table 7) is a decrease in production, accompanied by a reduction in pollution.

	Table 7. Extraction industries in Albania (tons)					
Products	1993	1994	1995	1996	1997	1998
Crude oil	568,045	535,345	520,866	488,214	359,666	364,627
Natural gas, (thousands						
m ³)	81,881	52,116	27,706	22,698	18,271	16,551
Coal	214,662	1,819	5,570	100,946	39,826	48,706
Chromium ore	281,130	116,015	104,022	263,358	157,203	150,285
Chromium concentrate						
	32,971	11,381	30,892	30,402	21,881	20,195

Table 7. Extraction industries in Albania (tons)

Copper ore	239,384	177,712	257,709	187,765	24,895	53,477
Copper concentrate	13,922	8,693	16,664	10,981	869	2,294
Source: NEA_State of the Environment Report 1007-1008						

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

An important environmental problem associated with the extraction industries is the high ecotoxicity level of wastewater and solid waste discharged from oil drilling, and chromium and copper extraction. Since end-of-pipe technology was practically non-existent, the cumulative environmental damage has resulted in high levels of toxicity. The Fani River is intensely polluted by 6-valent chromium compounds; thousand of tons of sludge with high chromium and copper content have been disposed of by extraction industries without any treatment along the riversides. Gjanica River, for example, is severely polluted with hydrocarbons and is practically a dead river. Along with the Semani river, which is polluted by the oil drilling and refining industry, it flows directly into the Adriatic Sea.

The situation is critical even in Ohrid Lake, an environmentally sensitive area. Its flora and fauna are under continuous threat from a nearby dump full of waste from the enriching iron ore plant.

The current presence in Albania of well-known foreign companies dealing with mineral extraction and having a sound environmental management systems expertise, is a good sign for initiating environmentally friendly industrial practices in Albania.

Concerning fishing, new and uncontrolled practices are adversely affecting biodiversity. During the last five years, there has been fishing along the entire marine stretch within a depth of 2 to 30 meters. This practice has led to the depletion of the breeding grounds of Sparidae, Soleidae, Mullidae, and other families. The breeding grounds of Posidonia oceanica have also severely deteriorated due to changes in the structure of the fishing fleet. Most fishing boats are equipped with small power motors, and are therefore able to fish only in shallow areas no deeper than 50 meters.

Illegal fishing based on the usage of explosive and poisonous materials also affects internal waters and has an adverse impact on critical periods of fish growth. All of the major lakes, i.e. Ohrid, Shkodra, and Prespa have been affected. These lakes are of international importance because of the high number of endemic species present in their aquatic fauna, some of which are globally endangered.

Foreign vessels fishing offshore Albania damage the habitats of fish and crustaceans which are in demand in western markets. Along the Ionic coast there has been severe damage to benthic forms. Foreign divers extract the mollusc Lithofaga in such a way that entire coastal rocks are damaged. Urgent measures are needed to ensure that such practices do not cause desertification of marine life along the rocky areas of the coast.

Due to the lack of funds for maintenance, sea-lagoon communication channels have deteriorated with a notable reduction of water exchange between the wetlands and the sea. This phenomenon is accompanied by the transformation of the limnologic regime, which in its turn affects the icthyofauna. Most problematic is the situation in the Narta lagoon, where almost half of the area remains dry for the major part of the year.

Tuble 0. Red list of marine and neshwater species				
No. of species				
30				
30				
46				
41				
59				
17				

Table 8. Red list of marine and freshwater species

Fish	60
Amphibians	15
Reptiles	6
Birds	33
Mammals	6
Total animal species	283
Total plant and animal species	313

Source: Red	list and Red	data books	1995 and 1997
Dource. Red	mot und ree	a dulu books.	1)))) und 1))/

Uncontrolled hunting is a major factor of disturbance on biodiversity, especially during the winter, when migratory winter birds are at risk. Birds are abandoning certain areas, such as Kune-Vaini, Patok, Pishe Poro, and the Semani delta. There is a reduction in the population of some species due to illegal hunting methods, including poison which is sometimes used for the killing or capture of wildlife on the ground. Carnivorous mammals and birds of prey are the most affected.

Tourism has begun to threaten biodiversity since the 1990s. The number of tourists who visited Albania in the 1990s was greater than during the entire period from 1960 - 1990, while in 1996 their number reached 75,000, or twice as many as in 1992. The majority of them took vacations in the coastal areas. Some of the tourists engaged in hunting without having obtained the required licenses, thus contributing to the further deterioration of coastal fauna (e.g. Kune-Vaini, Divjake, and Patok).

The major damages caused by past and recent hunting and fishing practices are summarized below:

- loss and fragmentation of habitats;
- damage, impoverishment, and degradation of ecosystems and habitats;
- disturbance and persecution of wildlife in nature;
- species extinction or risk of extinction; and
- genetic deterioration and erosion.

2.2.8 Structural adjustment, privatization

The fundamental law on privatization was adopted by the Albanian Parliament in 1991. The privatization process of the public economy in Albania has followed the same phases as in the other CEE countries:

- Privatization of small units
- Privatization of small and medium factories
- Privatization of large factories by the special program

Privatization of small units was carried out quite rapidly, and in 1992 75% of commerce and service units were transferred to new owners. In 1998 the Albanian Parliament approved the Law "On the Privatization of Sectors with Special Interest for the Economy" and "Privatization Strategy". Its aim is to: 1) increase efficiency of strategic sectors; 2) lessen their burden on the state budget; 3) eliminate monopolies through price liberalization; 4) create an environment for fair competition.

The mining industry is one of the Albanian strategic sectors to be privatized in the period 1999-2000.

The Framework law "On Environmental Protection" stipulates that prior to any other permits for different projects and activities, each applicant must first have the environmental permit. Thus, any

request for the privatization of state-owned enterprises must be accompanied by the environmental permit issued by the NEA on the basis of the environmental impact assessment carried out by the applicant.

2.3 Population

High growth rates among the Albanian population during the past 50 years have gradually increased the anthropogenic impact on nature and biodiversity. Many new towns and villages were constructed, and existing ones were enlarged with the enhancement of infrastructure and economic activities. Compared to 50 years ago, the Albanian population has nearly tripled and has reached 3.4 million. The fragmentation, reduction, and loss of natural habitats have been a direct result of demographic developments and the urbanization process.

Since 1990 a relatively free movement of people from rural areas toward urban ones has occurred. This movement was uncontrolled and led to particular stress on the country's coastal and wetland ecosystems that are ecologically more sensitive. At the beginning of 1997, the population in coastal areas was 2.4 times higher than in 1960. About 54% of Albania's population (1997) live in the coastal districts (including the Tirana district) that cover 35.7% of the country's area. In this area, population density has increased from 82.4 inhabitants per square kilometre in 1960, to 179.3 inhabitants per square kilometre in 1997, reaching a maximum of 388.4 inhabitants per square kilometre in the central zone (Tirana, Durres, and Kavaja districts).

Year	1990	1993	1995	<i>1998</i>
Total population				
(000/inhabit.)	3,256	3,166	3,249	3,354.3
1. Urban population				
(000/inh)	1,175	1,314	1,381	1,543
2. Rural population	2,080	1,852	1,868	1,811.3
(000/inh)				
Working age population,	1,896.7	1,763.4	1,820	1,888
(000/inh.)				
Male, %	51.4	49.4	49.5	49.2
Female, %	48.6	50.6	50.5	50.8
Density (inh/sq. km.)				
1. Total population	113	110	113	117
2. Urban population	6,350	7,100	7,465	8,250
3. Rural population	72	65	65	64
Natural annual growth, (%)				
	1.9	1.7	1.6	1.2
Arable land,				
(000/ha)	704	702	702	699

 Table 9. Main Albanian population indicators

Environmental impacts caused by the increasing number of newcomers have been obvious. The coastal areas, particularly those close to the major urban centres (Tirana, Durresi, Lezha, and Vlora) are now facing a number of emerging problems with severe impacts on biological and landscape diversity. In summary, they are:

- The intensification of natural resources assimilation activities, mainly the fish and forest ones;
- The enlargement of construction sites, sometimes leading right up to the seashore;
- The degradation, deterioration, and deformation of the landscape;
- The increase of urban wastewater discharges into the environment, which aggravate the situation in view of the complete absence of sewerage treatment throughout Albania; and

• The increase of urban and industrial solid wastes. Thousands of tons of urban and industrial wastes are being deposited daily in different sites, the majority of them in inappropriate places.

Population movements also affect the areas from which people migrate, through:

- Abandonment of agricultural land on the slopes, which leads to erosion and land degradation;
- The cutting of fruit plantations or their total abandonment and degradation;
- Overexploitation of forest resources; and
- Overgrazing and further depletion of forests and pastures.

Albania is rich in water resources, and at the same time the level of water use is very low. Water supply is based mainly on underground water and, to a lesser extent, on surface waters. The water is used in different industrial sectors, as public works, and for agriculture, industry, energy production etc. The development of all these sectors leads to an increased demand for water. The high losses of water in the distribution network, in addition to mismanagement, have artificially increased demand. The major underground water user for 1997/98 is the public utility, mainly for drinking water supply; another important factor in underground water consumption is irrigation for the agricultural sector. The drinking water supply network covers all districts of the country. However, the distribution network in many areas is greatly amortized, and there are high losses in distribution, in addition to abuse and mismanagement. Further, the high and uncontrolled migration of population towards the major urban areas has created serious discrepancies in the water supply, which in most cases is quite low, usually between 20 - 50 litres per person per day. This factor of course has a negative impact on health.

2.4 Institutions, enforcement

The establishment of the Committee of Environmental Protection (CEP) in 1991, under the authority of the Council of Ministers as the main governmental body responsible for environmental issues, represents the first serious institutional step in managing environmental issues in Albania. Since its establishment, several laws have entered in force, local environmental agencies have been created, and some monitoring programs and environmental projects have been implemented.

The transformation of CEP into the National Environmental Agency in 1998 is one of the most important steps in the path of institutional strengthening and capacity building. Being under the authority of the Council of Ministers, the NEA now has more institutional power, increased competency, and much more administrative and legal space for action.

In spite of these achievements, the local and central staff needs to be more professional in compliance with the multi-disciplinary character of environmental problems, and in addressing the lack of practical work experience. In particular, EIA and inspection bodies need capacity building and implementation of institutional strengthening programs.

Nevertheless, weakness to enforce legislation, poor implementation and ignorance of the existing laws are a serious drawback in management of environment in Albania.

Budget in thousand leks	1994	1995	1997	1998	1999	2000
Total	46,146,000	86,068,000	126,388,000	148,919,000	148,318,000	152,370,000
Environment	49,340	39,359	16,337.9	30,931	42,000	53,880

Table 10. Share of the State budget allocations for the environment.

Because of the country's economic and financial difficulties, the environment is not considered a priority among other critical national issues. Consequently, and also due to the difficult economic situation of the country, the state budget allocations for the environment are very limited. The environmental sector's share in the total state budget is no more than 0.01% (Table 10).

The majority of the funds are expenditures for wages and other administrative expenses. Normally, only about 14% of the total environmental budget goes toward investments.

Role of NGOs

In Albania there are 60 environmental NGOs, all established after 1991, of which about 25 are active. Their role is to promote public awareness and participation in the protection of the environment and nature. During the past decade they have greatly enhanced their activities and projects with the support of foreign and national donors. Gradually, their activity has spread throughout the country. Furthermore, a forum of environmental NGOs has been established in order to increase their authority. However, the environmental movement is still weak and its impact on society and the general public is limited. Some of the reasons for this are:

- Lack of experience;
- Total lack of financial and material means (the only financial source for the majority of NGOs is the contribution of their members and the project funds released by foreign donors);
- Concentration of work in the hands of a few people and the non-activation of the members;
- Insufficient coordination of joint activities among NGOs;
- Limitation of activity by NGOs mainly concentrated in the bigger cities;
- Relatively low level of environmental awareness of the people; and
- Difficult economic conditions and political instability in the country, particularly during and after the crisis of 1997.

2.5 Gender

The question of links between gender and the environment in Albania, in the context of inequality has yet to be addressed. Apparently, there is no data confirming these links; even in the "Albanian National Women's Report 1999" recently published by UNDP, one hardly finds any reference to the matter.

Women's safety is at risk in Albania. Violence in the household is perceived as a serious problem, though no reliable data exist on this issue. In families composed of husband and wife, the female can achieve a higher status if she contributes to the family income. However, the high rate of female unemployment and wage inequality in the private sector increases women's economic dependency on their husbands. The average salary of a woman is about 80 - 85 per cent of a male's salary. In female-headed households the monthly family income is 42 per cent lower than in male-headed households. This is more common in centres with more than 10,000 inhabitants.

2.6 Risks

In general, the environment, i.e. the competition for scarce natural resources and environmental degradation in the region, cannot be viewed as a driving force for conflicts. On the other hand, political and ethnic tensions have been a catalyst for conflicts in the recent past, which in turn have affected the environment.

The crisis in Kosovo affected Albania mostly through the flow of refugees into the country (amounting to about half a million), military troops operating in Albania as aid distributors, and

only slightly by the military incidents in villages on the Kosovo-Albania border. The major impacts of the recent war in Kosovo have been the destruction of soil fertility and structure, damage to national parks and protected areas, and waste water and sewage problems.

The huge number of refugees caused difficulties in the scarce water supply situation of the country, thus decreasing the water supply for urban areas. There was no sewage water treatment in any of the refugee camps on the territory of Albania. Lack of sewage water treatment and discharge into inappropriate areas, especially for tented camps, created major problems. This will remain an important environmental and health problem throughout the country, causing soil pollution or infiltration of polluted water into the underground water table.

Considering the small percentage of agricultural land in Albania, one of the main environmental impacts of the construction of refugee tent camps is agricultural soil damage. Some hundreds of hectares of soil have lost their function as arable land because of the concrete and gravel layer used for camp surfacing in Durres, Elbasan, Lezhe. This problem is more recognizable in the districts where massive tent camps have been constructed. In Durres (in the Hamallaj area), camps occupied approximately 100 hectares of agricultural land, which has been covered by concrete and gravel to a depth of 60 centimetres. In Elbasan, a six hectare area may require 10 - 15 years to recover. At the camp in Lezhe (Shengjin), 2,000 cubic meters of gravel have been used to cover a 1.3-hectare area.

Land mines and unexploded munitions continue to damage the environment on the northeast border with Kosovo (Tropoja-Kukes). The number of casualties from landmines is still growing (125 people have reportedly died since the end of the conflict).

The impact of the refugees on protected areas has been quite visible, especially in the western part of Albania along the Adriatic coast. A number of protected areas had refugee camps built within them (Rrushkull, Divjaka), or have been adversely by the felling of trees or pollution of water sources. The Rrushkull camp (Durres), with an area of 14.5 hectares, was built within a hunting reserve, where it caused considerable damage to fauna. Other sites were set up near wetlands, within protected areas. One of the biggest human environmental problems has been solid waste disposal. In districts which have no landfill sites, waste disposal has been carried out along the rivers.

Illegal tree cutting has been recently aggravated following the Kosovo crisis, as the demand for timber inside Kosovo is increasing. Uncontrolled cutting occurs even inside the Protected Areas. Most of this cutting was done to provide timber for industry and construction. Fir and pine forests have been most damaged by this activity because of their high quality and high selling price on the uncontrolled market.

3. Responses

3.1 Country's environmental work

3.1.1 Institutions

The Parliament is the main authority of the Albanian legislative system. The Permanent Commission on Health and Environment is the main Parliamentary body dealing with the environment.

The National Environmental Agency (NEA) is the highest governmental body responsible for environmental issues. In 1998, a Governmental Decision transformed the former Committee of Environmental Protection (CEP) into the National Environmental Agency (NEA) by positioning it directly under the authority of the Council of Ministers, instead of the Ministry of Health and Environmental Protection, as it was previously. This important and progressive step has strengthened and enhanced the position of the NEA, and prepares it for possibly becoming the Ministry of Environment in the future. It has also strengthened the NEA legislative and policymaking initiatives.

The staff of CEP consisted of only 3 persons in 1991, whereas the present NEA consists of 70 employees with the following structure:

- The Chairman
- Directorate of Air & Water Quality and Waste Management
- Directorate of Nature Conservation and Soil Rehabilitation
- Directorate of Project Implementation,
- Directorate of Service Organization and Human Resources
- Section of Legislation, Foreign and Public Relations
- Twelve Regional Environmental Agencies (Environmental Inspectorate body), in twelve Prefectures the major administrative units of Albania.

Duties and the responsibilities of the NEA are as follows:

- Defines the governmental strategy in the field of environment.
- Organizes and coordinates environmental protection on a national scale and proposes concrete steps to be undertaken for the protection of the air, water, soil, biodiversity, and genetic wealth of the country.
- In cooperation with relevant ministries, approves the admissible limits of gaseous, solid and radioactive pollutant substances discharged into the water, air, and soil, as well as the admissible levels of harmful and toxic substances in hazardous wastes.
- Represents the national focal point for different environmental organizations and issues.

The Regional Environmental Agencies (REAs) at the prefecture level have three principal duties:

- Control and enforcement of the environmental legal framework.
- To follow and implement preparatory procedures for environmental permits.
- Collect and elaborate data on the state of the environment at district and regional levels.

At the inter-ministerial and ministerial levels, there are other institutions of public administration and scientific research institutions which are responsible for the administration, research, and monitoring of the environment and the country's natural and biological resources.

The Ministry of Agriculture and Food is one of the national institutions with important environmental responsibilities including the administration, protection, studying, and inventorying of biodiversity. The General Directorate of Forest and Pastures (GDFP) within this Ministry is responsible for the management and administration of Protected Areas and National Parks, and of wildlife and game hunting in Albania. Recently, a Project Environmental Management Unit (PEMU) was established within the GDFP. Its duties are to monitor the implementation of mitigation measures recommended under the environmental impact assessment process of the Forest Management Project. The General Directorate of Fisheries administrates the resources of marine aquatic fauna, and of the freshwaters in areas where there is fishing and aquaculture.

3.1.2 Policies

The National Environmental Action Plan (NEAP), prepared in 1993 on the basis of the National Environmental Strategy, aims at the integration of environmental protection measures in the development programs of the economic and social sectors. The NEAP constitutes a detailed analysis of this strategy and has defined tasks for Ministries and Institutions whose activity has an impact on the environment. The responsible ministries for the NEAP implementation are: Ministry of Public Economy and Privatization, Ministry of Food and Agriculture, Ministry of Health, Ministry of Public Works, Ministry of Transport, National Committee for Tourism Development, etc.

In the meantime, different policy documents have been prepared:

- 1. The National Water Strategy, 1996. It defines national priorities and necessary institutional structures for NEAP implementation. It identifies short-, medium- and long-term priorities regarding the completion of a legal framework, establishment of institutional structures, and different investment projects related to sustainable water management.
- 2. The National Waste Management Plan. Under this plan, landfilling is defined as the most suitable treatment method for at least a decade.
- 3. National biodiversity strategy and Action Plan has been elaborated (2000). The document defines national priorities and necessary institutional changes for the implementation of the Convention on Biological Diversity. It has been forwarded to the government for formal approval.
- 4. During 1993-1996 the "Program on Coastal Zone Management in Albania" was initiated as a cooperation between the Albanian Government, UNEP, the World Bank and the European Union. The main objectives of the program were: 1) biodiversity protection in the coastal areas of Albania, including the marine habitats, fresh, and intertidal waters; 2) development of tourism and of recreational activities; and 3) institutional strengthening of the institutions responsible for coastal management in Albania.

Existing National Programs

The preparation of the National Environmental Action Plan is a continuation of previously implemented activities, including those undertaken with international cooperation and assistance.

Part of this cooperation is the presence of many international organizations in Albania such as the European Union, UNDP, World Bank, International Monetary Fund, European Bank for Reconstruction and Development, and others. They have financed and prepared studies on the environment in Albania.

The first was the study "On Environmental Status and the Environmental Strategy" financed by the World Bank. Its first phase was completed in 1992. It was considered as technical documentation in support of the Albanian Government, and served as a basis for the National Environmental Action Plan.

The second phase of the "Environmental Strategy in Albania" was completed in 1993. It was based on the cooperation of the CEP with the World Bank, and financed by the Government of Italy and the World Bank. This important study preceded other concrete projects in this area. Based on it and on the Declaration of the Ministers of Environment (Lucerne, 1993) together with its document: Environmental Action Program (EAP), Albania prepared its National Environmental Action Plan (NEAP).

During the past years, Albania has continued to work to fulfill the duties defined in the agreement between the Government and UNESCO as part of the regional program on the pollution of the Mediterranean Sea (MEDPOL). This has been done through pollution monitoring in coastal areas. Thus, in cooperation with UNEP and with the Mediterranean Action Plan (MAP) based in Athens, Albania began the process of pollution monitoring in the Ionian and Adriatic Seas as well as on the main rivers that discharge into the seas.

Cooperation also began with the Mediterranean Technical Assistance Program (METAP), which included some programs on the "Assessment of Environmental Status" financed by the European Community and the World Bank.

Another program financed by the World Bank was the "Ecological Survey of the High Forests in Albania" (1995). This program aimed to address the needs of biodiversity protection for the high forests of Albania through the extension of Protected Areas and the improvement of forest management. The Project on Forests Management being implemented with the technical and financial assistance of the World Bank and other foreign donors, aims at strengthening the management of the protected areas, as one of its components.

Some of the programs in which NGOs have been more active aiming at raising awareness on the conservation of nature and biological diversity in Albania are: "An NGO Strategy for Nature Protection in Albania" (1994-1997) financed by REC (Budapest), IUCN and MilieuKontakt (Netherlands), and "Biodiversity Protection of the Ohrid-Prespa Transboundary Lakes" (PPNEA, EURONATURE, GTZ).

3.1.3 Legal framework

The first basic law on the environment was approved in 1967. Nevertheless, the development of a modern environmental legal system based on democratic principles began only in 1991.

Within the legal framework, the two most important acts that have played an important role in the activity of NEA and in the field of environmental protection are:

1. The framework Law "On Environmental Protection" of January 1993. Its key issues are:

- Prevention and reduction of pollution;
- Sustainable management of natural resources, avoiding their over-exploitation;
- Information recording and provision on pollution levels for every physical and juridical private or public person;
- Binding provisions to carry out the environmental impact assessment procedures;
- Integration of polluter-pays-principle, etc.
- 2. Decree of the Council of Ministers, 1995 "On the tasks that Ministries, Research Institutes and physical and legal persons have in regard to environmental monitoring". This Decree obliges some central specialized institutes to deal with environmental monitoring of the air, water and soil and to supply NEA with relevant data every three months.

There are also a number of laws which have been approved since 1991, and represent important advancements in the legislative area:

- Laws on the Land and its Distribution (No. 7491 and No. 7501, 1991)
- Law on the Forests and the Forest Service Police (No. 7623, 1992)
- Law on Environmental Protection (No. 7664, 1993)
- Law on City Planning (No. 7693, April 1993), amended in 1998

- Law on Plant Protection Service (No.7662, 1993)
- Law on Protection of Medicinal and Taniferous Plants (No. 7722, 1993)
- Law on Development of Areas with Tourism Priority (No. 7665, 1993)
- Law on Hunting and Wildlife Protection (No. 7875, 1994)
- Law on Fishing and Aquaculture (No.7908, 1995)
- Law on Pastures and Meadows (No.7917, 1995)
- Law on Protection of Fruit Trees (No. 7929, 1995)
- Law on Water Resources (No. 8093, 1996)
- Law on Construction, Administration, Maintenance, and Operation of Water and Drainage Systems. (No. 7846, 1994)
- Law on Water Supply and Sanitation Sector Regulation(No. 8102, 1996)
- Law on Public Waste Removal (No. 8094, 1996)
- Mining Law of Albania (No.7796, 1994)

A large number of bylaws and regulations have also been drafted and approved, for example, draft laws "On air protection"; "On gaseous emission standards" and "On Environmental Impact Assessment", as well as an updated draft regarding environmental monitoring in the Republic of Albania. The latter defines for the first time the official use of a set of environmental indicators for the state of the environment and impacts and pressures thereon, according to the OECD and EEA criteria. During 1999, the "Public Access to Environmental Information" draft law and two draft laws "On Nature Conservation" and "On Protected Areas" were prepared. The latter two embody the obligation for the preparation of management plans for all of the country's parks and protected areas.

In 1998 the Albanian Parliament approved Law No. 8364, "On some changes and amendments to the law No. 7664, dated 21.1.1993: "On the protection of the environment" which legalized the transformation of the Environmental Protection Committee into the National Environmental Agency (NEA). The Constitution of the Republic of Albania approved in 1998 provides for further improvement and completion of the legal and institutional framework in the field of environment, nature and biodiversity protection.

With all the efforts made toward the improvement of the environmental legal system, there are still gaps, so the existing legal system needs to be further developed and refined in the future, particularly regarding nature protection, and biological and landscape diversity. In addition, the existing legal system is not clear in some cases, e.g. there is overlap regarding responsibilities and sometimes even contradictory language. This situation has created confusion with respect to establishing the proper competencies and responsibilities, and, as a consequence, implementation of the laws has been weak.

Impacts on the environment have been exacerbated by poor implementation and ignorance of the law, rather than because of gaps in the laws. Actually, the main issue is law enforcement, as there are virtually no sanctions in case of damage to the environment or non-compliance with the law. This situation has had negative effects on the existing institutional structure. The weak implementation of the law is also a result of the lack of trained staff, information and education campaigns. The absence of law enforcement, low collection of fines because of weak institutions, and the corruption of the judicial system have also had adverse impacts on the environment and on biological and landscape diversity.

A solution to the country's environmental problems cannot be anticipated as long as the legally responsible institutions do not cooperate to enforce law implementation. This will require taking concrete actions to work together to prevent and reduce the causes and risks of environmental degradation, since co-operation is the most cost-effective solution. More professional training for

the employees responsible for implementing the law and regulations is required. District and central inspectors should have greater and more well-defined authority, in particular when dealing with illegal construction or construction undertaken without the appropriate environmental permits.

International Environmental Conventions

Until 1990, the participation of Albania in international organizations and agreements was only formal in nature and very limited.

- On February 4, 1975 Albania ratified the Agreement "For Non-proliferation of Nuclear Weapons".
- On March 26, 1975, Albania ratified the Convention "On the Prohibition of the Development Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction".
- On March 20, 1979 Albania ratified the Convention concerning "The Protection of the World Cultural and Natural Heritage".

During the last decade, new steps were taken to enlarge international, regional and global cooperation, and at the same time the benefits of this cooperation were felt.

The environmental conventions of which Albania is a party are as follows:

- On May 30, 1990, Albania participated by accession to the Barcelona Convention "For the Protection of the Mediterranean Sea against Pollution" (Barcelona, February 16, 1976).
- On October 4, 1991, Albania ratified the ESPOO Convention (Finland) "On Environmental Impact Assessment in a Transboundary Context."
- On March 18, 1992 Albania signed the convention "On the Protection and Use of Transboundary Watercourses and International Lakes" (Helsinki March 17, 1992). The convention was ratified on January 5, 1994.
- The convention "On Transboundary Effects of Industrial Accidents" was approved in principle on March 18, 1992, and ratified on January 5, 1994.
- On November 29, 1995 Albania participated by accession to the Ramsar Convention (Ramsar, 1971). Decision No. 413 on August 22, 1994 of the Council of Ministers declared the area of Divjaka-Karavasta as a "Specially Protected Natural Ecosystem". Albania became a party to this convention through ratification on March 29, 1996.
- On October 31, 1995 Albania signed the Bern Convention "For the Protection of Flora and Wildlife Fauna of the Natural Environment in Europe" which was ratified by the Parliament on March 2, 1998.
- Albania is among the 35 countries which signed "The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters" (Aarhus-Denmark, June 25, 1998).

Albania is a contracting Party to several other important global, regional and international conventions and protocols and their amendments, such as:

- Adherence in 1994 to the Convention on Climate Change (New York, 1992)
- Adherence in 1994 to the Convention on Bio-diversity (Rio, 1992)
- Adherence to Climate Change convention, 1992
- United Nations Convention on Climate Changes, 1995
- Convention on Industrial Accidents in a Transboundary Context, 1991
- Vienna Convention "On the protection of Ozone Layer" and Montreal Protocol "On Ozone Layer depleting substances", 1999
- Convention "On Combating Soil Desertification', 1999

Albania's participation in other conventions is still under preparation:

- The Convention on Protection of Migratory Species of Wildlife, known also as the Bonn Convention (Bonn, June 23, 1979. Entry into force on 1983). Albania has signed two protocols of this convention (for the Mediterranean mammals and for the *Numenius tennuirostris*). The documents for Albania's participation in this convention have been prepared.
- Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Destruction. The convention was adopted in 1989 and entered into force in May 1992. The Council of Ministers and the parliament approved the participation of Albania, but the process of document deposition at the UN by the Foreign Affairs Ministry still needs to be completed.
- The Convention on Desertification and dryness aiming to combat these phenomena in countries which suffer from them (December 4, 1996). Annex No.4 recognizes the desertification problem in Mediterranean countries.
- The Convention on International Trade in Endangered Species of Flora and Fauna (CITES) signed in Washington D.C., March 3, 1973 with amendments made in Bonn, June 22, 1979.
- The Convention on Long Range Air Pollution in a Transboundary Context and its four protocols and adherence to the amended documents of Barcelona Convention and its new protocols.

3.1.4 Financing

There is no history of environmental taxes or charges in Albania. However, the NEA has already prepared a draft regarding the establishment of an environmental fund and very soon it will be forwarded to the government for approval. The framework law on Environmental protection provides that incomes from license tariffs and fines for non-compliance with the law should create a small fund that could be used for pollution cleanup, landscape rehabilitation, environmental monitoring, environmental research projects, support for NGOs, EIA studies, etc. Since in Albania the taxation system is unified, any environmental tax or charge can be introduced only by amending the law "On Taxation System".

The revenues from non-compliance fines and administrative licensing process are much too small to fund important environmental projects. Under these circumstances, different environmental projects have been implemented in recent years within the framework of the national program for research and development, totally funded by the state budget and managed by the Ministry of Education and Science.

3.2 International financing

3.2.1 Sida

The following common goals are characteristic of Swedish aid in Albania ("Strategi for bistandet till Kosovo (FRJ), Albanien och Makedonien", available from Sida):

- To support stability and peace in the region,
- To support the safe return of refugees,
- To support democratic development of the societies through building of democratic institutions and development of civil society,
- To support a socially sustainable market economy, which can help generate sustainable growth and alleviate poverty.

Sida has met the abovementioned goals through following projects:

- Various humanitarian support as a consequence of the Kosovo war.
- National Road Plan.
- Demilitarizing of the civilian population in exchange for development rewards.
- Management and coordination of mental health support and mental health policy planning.
- Small- and medium-size enterprise development assistance.
- Training of Albanian lawyers.

Sida's support to Albania has mainly concentrated on the support of projects within the health and humanitarian sectors and local administration. Small funds have been made available for small and medium enterprise development.

During 1999, SEK 10.4 million (approximately USD \$1.3 million) were allocated for multilateral and bilateral humanitarian aid for Albania. For the year 2000, there are plans to allocate SEK 25 million (USD \$3.1 million) for Albania.

According to Sida personnel the development support has not influenced the environment in a negative way. However, as yet there have been no particular environmental programmes in Albania financed by Sida, and thus there are no specific routines for follow-up of the effects on environment. Examining Sida's contribution to the sustainable development of Albania, it can be said that there were some gaps in past development programmes. For example, nothing has been done in the areas of poverty alleviation and gender equality, little has been done in order to get the economy up and running, and more efforts are needed to make the country's institutions work efficiently.

Sida support appears not to have taken into consideration the environmental strategies/plans, and their earmarked priorities. Albania's National Environmental Action Programme (NEAP) of 1993 aims for the integration of environmental protection with the development programs of the economic and social sectors. Priorities of Albania mentioned in the NEAP are urban waste management, wastewater treatment plants and cleanup of the industrial pollution from the past. Moreover, NEAP has also established sectoral policies for waste, biodiversity, water management, and its coastal zones. Although bodies such as the World Bank, EC and UNESCO and Albania's former Commission for Environmental Protection were involved in mapping environmental priorities, Sida has not yet integrated its efforts with the work of other donors. Sida is now mapping the activities of other donors in order to avoid overlapping of development assistance. It is said that the Ministry of Economic Cooperation and Trade in Albania is and will be the coordinating body for the international development assistance granted to the country.

At present, Sida is developing a more detailed development assistance programme strategy for Albania. There are plans for development assistance in the areas of administration, agriculture, health and the environment. Sida's development strategy for Albania is planned to be ready during the first half of 2000 and will preferably focus on a few projects in certain geographical regions. Moreover, strengthening of the environmental profile within existing and future projects is planned.

The risk of corruption in the country is seen as considerable, which means that international donors will have to follow the implementation of their projects closely. Hence, Sida is considering to co-finance projects with multilateral or other bilateral donors.

3.2.2 Others

As long as internal funds earmarked for the environment are scarce and poor, foreign aid remains the main source of environmental investments in the near future. Fields that require immediate assistance with investments are those already addressed as a priorities under the Albania Environment PHARE and Life Programs of the EU, namely urban waste management, wastewater treatment plants, cleanup of old industrial pollution, etc.

The most important recent foreign environmental financing has been within the framework of the EU PHARE Programme AL 93/06, amounting to ECU 3.3 million. This Programme, which began in 1995 and was completed in 1997-98, consisted of 10 projects. Among the main achievements of the Programme were:

- Training of the Regional Environmental Agencies' inspectors, as well as other environmental experts collaborating with the National Environmental Agency.
- Preparation of the National Water Strategy.
- National Waste Management Strategy.
- LIFE project "Organization of the Urban Waste Management in 6 Main Albanian Municipalities". Under this program, technical and financial projects for six beneficiary towns are prepared. At the present time, funding for one landfill has been secured and construction is expected to begin within a short time.
- Pilot project for preparation of the management and conservation plan for Dajti National Forest Park.
- Comprehensive environmental study of the oil field in Patos-Marinez.
- Management Plan of the Karavasta Lagoon.
- Raising public awareness a demonstration project related to waste collection on the Golem beach.
- Some other international projects funded by GEF which began in 1998 are:
- "The Strategy for Biodiversity Conservation / Biodiversity Action Plan for Albania" has a budget of USD \$96,000 and is being implemented through the IBRD.
- "Lake Ohrid Management Plan", (USD \$1.78 million for Albania). This three-year international project implemented by WB, is partly funded by the Albanian and Macedonian Governments.
- "Enabling Albania to prepare its First National Communication in Response to its Commitments to the UNFCCC". This two-year project has a budget of USD \$26,3744 and is being implemented through UNDP.
- "Conservation of Wetlands and Coastal Ecosystems in the Mediterranean Region". This is a regional project that includes five Mediterranean countries, and is being implemented through UNDP.

Further projects which support the NEAP and also sectoral policies are elaborated under "National Programs" under paragraph 3.1.2.

During the period 1993-2000, some other institutional environmental projects funded with foreign aid have been completed, and others are under implementation:

- 1. Full environmental study of pollution by linden and chromium compounds on the premises of the former linden factory in Durres, USD 7,360 funding of Italian Government, completed.
- 2. Metap WB project, NEAP Update immediate measures USD \$200,000 tendering procedures for selecting the consultant have been completed.
- 3. PHARE Country Operational Program 1997 (COP 97), 320 000 ECU under implementation.
- 4. Mediterranean Pollution Assessment Program (MedPol) UNEP Program, within the framework of the Mediterranean Action Plan and the Barcelona Convention. Albania is participating continuously in this program and received ECU 50,000 funding for Medpol phase

2, and USD 67,000 for Medpol phase 3. The aim of this project is the trend and compliance monitoring of the Mediterranean Sea.

- 5. In 1995, EU under the LIFE Third Countries Program, NEA, the Ministry of Economic Cooperation and Development of Germany, Ministry of Agriculture, Nature Conservation and Environmental Protection of the Turingen Land, Germany; and the Municipality of Terni city, Italy, together established the ECAT Tirana (Environmental Centre for Administration and Technology). This centre is established as an advisory body dealing with problems in the field of environmental technology transfer. ECAT Tirana has implemented different environmental projects therein, the most important being the EU/LIFE project: Development of a Management Plan for the Health Care Wastes (HCW) of Tirana Hospitals ECU 360,000.
- 6. At the beginning of June, 2000, the US Embassy in Tirana announced the donation of USD \$1 million to help remove remaining mines laid by Serbian forces along Albania's frontiers during the Kosovo confict in 1999.

4. Conclusions

Within the entire spectre of the reconstruction process in Albania, the environmental dimension should not be lost. This is because of the evident environmental degradation and poor natural resource management caused by economic mismanagement in the past. It is also because of new environmental problems created during the difficult and prolonged transition to a market economy. On the other hand, sound natural resource management and a good quality environment are a necessity, as Albania seeks to develop sectors such as agriculture, tourism, oil, mining, and industry in the future.

Soil, surface waters, air, loss of biodiversity, are key areas under threat, and the urban environment is an emerging concern.

Land erosion is a widespread phenomenon caused by different natural factors, but also by badly managed human activities. Among the human factors which have had a stronger impact are: deforestation, irrigation techniques, and a low degree of environmental awareness, as well as the sharp reduction in funding for forest and agricultural land maintenance.

The contamination of surface waters is mainly caused by two factors: the uncontrolled use of fertilizers and pesticides in the past, and the present lack of treatment of discharges from industrial activities. The majority of industries operating in Albania apply very old technologies that do not provide any emissions or effluent treatment. Thus, industry continues to be a contributing factor in water and air pollution, as waste prevention at the source, recycling and recovery policies are unknown in Albania.

The rapid growth of the number of vehicles in the last decade has notably increased the share of transportation in air pollution, particularly in large urban areas, and tends to increase further.

The mismanagement of solid urban waste, and the complete absence of sewage treatment throughout Albania, accompanied by an intensive and uncontrolled movement of population from rural areas towards cities, has greatly affected the urban environment. Although Albania is rich in water resources, water use per capita is very low. In most cases water supply is quite low because of the very old existing supplying network (great losses of water during its distribution), and the lack of means for full reconstruction of networks. Low water supply has a negative impact on health.

All of the above environmental issues could be addressed during the reconstruction process of the country by considering enforcing and adoption of economic instruments, institutional strengthening, capacity building, and direct investments.

Among them, high-priority environmental projects should include:

- Water supply development and waste water treatment in main urban and rural areas throughout the country, as well as waste water treatment in coastal cities Durres and Vlore (for which executive design are made), and in some sensitive environmental areas, like Shkoder and Pogradec, where transboundary waters are shared.
- Urban solid waste disposal by modern techniques, which protect both the environment and human health. For some main cities: Shkoder, Elbasan, Fier, Pogradec, Korça technical projects for sanitary lanfill construction already exist, waiting to be financed, while for the capital Tirana and coastal cities Vlora and Durres, still there are no any plans or developments.
- Combating soil erosion and deforestation by launching landscape rehabilitation and forestation programmes in degraded areas, like hilly areas in Kerraba (Tirana), Mallakastra (near Fieri), Sulova and Dumrea (near Elbasan), and the higher part of Shkumbini valley, etc.

• Historic industrial pollution cleanup in environmentally sensitive areas such as Ohrid Lake, and the degraded coastal zone f.e. the abandoned damp of former iron enriching factory by Ohrid Lake, the coastal zone next to area of former Soda plant in Vlora, etc.

Since the Law "On environmental protection" was approved in 1993, much progress has been made in the field of improvement of the environmental legal system. Nevertheless, there are still gaps, overlapping of responsibilities and other weaknesses, and therefore the legal framework needs further development, clarification and refining.

For example, the law on biodiversity still is not approved, while the laws on fishing, waters and forests do not define clearly whose are authorities in charge for their management and protection.

Even so, the reality is that adverse impacts on the environment such as environmental degradation and pollution have been brought about by poor implementation and ignorance of the law, rather than by lack of legislation or gaps in the laws.

Consequently, law enforcement is a major issue in the field of environmental protection. In order to resolve the country's environmental problems, the legally responsible institutions should work together. Weak implementation of law is also a result of a lack of trained staff, reliable and up-to-date information, and education. The absence of law enforcement, low collection of fines because of weak institutions and poor monitoring systems, and the corruption of the judicial system are significant problems which need to be tackled effectively. In this regard, more opportunities for professional training, exchanges, study visits, and workshops for law enforcement staff are required.

Institutional strengthening of the National Environmental Agency in 1998, and the establishment and enforcement of the Regional Environmental Agencies are key measures towards the building up of institutional capacities. Under the direct authority of the Council of Ministers, the NEA has a higher institutional status, and legally, more power as well. However, both local and central staff need to be more professional, as lack of knowledge is apparent. Accordingly, in compliance with the multi-disciplinary nature of environment, capacity building and institutional strengthening programmes need to be implemented, particularly with regard to local inspection structures within the system of the NEA. Furthermore, the governmental authorities at the local level, responsible for sustainable management of nature and biological resources in their areas also need training in environmental issues, i.e. capacity building in the field of biological planning and management. They also need to be prepared for the dialogue and coordination process.

The Regional Environmental Reconstruction Program for South Eastern Europe (REReP) has also identified this concern as priority issue: and suggested the following activities to be undertaken: (i) cooperative development of a joint Environmental Action Plan for the SEE region; (ii) cooperation with SEE governments to develop a priority environmental investment program, as well as Environmental Impact Assessment and Strategic Environmental Assessment legislation and policy; (iii) assistance to SEE governments in drafting environmental laws and to SEE local governments to develop project preparation capacity; (iv) assistance to SEE governments to develop viable environmental funds and enact "green budget reforms"; and (v) cooperative development of the decision making capacity of environmental officials.

Priority measures on a national scale should support plans and projects for the following activities:

• Enforcement can be strengthened through the organization of pollution monitoring at industrial sites and urban areas near them, by establishing the admissible standards of pollution for operational enterprises. The crisis in Kosovo revealed that the monitoring of the environment has been very limited.

- Organization of the monitoring of urban pollution and the environmental situation, particularly in the large cities, including air pollution from SO₂, CO, NO_x, dust, hydrocarbons, and water contamination from urban and industrial discharges.
- For industry, the implementation of environmentally sound products and environmentally friendly technologies and services, including thermal energy, agriculture, different branches of industry, construction, and transport. Introduction of cleaner production and sustainable development principles.
- Support for Albanian environmental NGOs and the development of legislation that supports the process of establishing a stronger civil society.
- Development and strengthening of environmental NGOs through grants, which would allow them to carry out environmental projects in the region, through organizational and legal support, capacity building and training programs, and the development of integrated training publications, curricula and courses.
- Assistance to improve access to information, expand environmental information, media, and awareness raising on environmental issues around Albania.
- Developing environmentally related research, studies, and projects on environmental standards, conservation biology, integrated management of wetlands, treatment of chemical and urban wastes, cleaner production and other important issues.
- Introducing sustainable city development strategy by developing Local Agendas 21, including territory planning for sustainable development, which could lead to development of National Agenda 21.
- Assistance to link the national network of biodiversity experts with the regional and international networks, strengthen the basis for conservation, improve access to the biodiversity conservation, and assist in implementation of the international biodiversity related conventions.

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